EYE IN THE SKY
GPS technology is proving indispensable for tracking vehicle fleets and shipping containers. **PAGE 30**

DRILLING FOR IT
The United Arab Emirates is trying to make the city of Dubai an outsourcing oasis. **PAGE 8**

COMPUTERWORLD

THE VOICE OF IT MANAGEMENT ■ WWW.COMPUTERWORLD.COM

FEBRUARY 27, 2006 ■ VOL. 40 ■ NO. 9 ■ $5/COPY

IT MOVES IN
- WITH THE
Is business alignment elusive? The solution may be getting IT professionals totally immersed in the business units they serve.
PAGE 39
Verizon's Judith Spitz (left) collocates her IT workers in business colleague Mary Jane Johnston's call center for better customer service.

Oracle Still Faces Questions From PeopleSoft Users

Some say it hasn't provided a clear road map for apps

BY MARC L. SONGINI

Thirteen months after Oracle Corp. took over rival PeopleSoft Inc., the company's product road map appears to be its Achilles' heel among some of the customers it inherited.

In January 2005, Oracle clinched its $10.3 billion buyout of PeopleSoft, much to the trepidation of the latter's installed base. Asked how they feel now, seven of 12 former PeopleSoft customers interviewed over the past two weeks said they are neutral or positive about Oracle's handling of the merger. But five users said they remain wary of Oracle's plan for implementing Fusion, a next-generation suite of applications that will combine elements of all the company's current products.

> **There are still many questions that have yet to be answered.**
> CIO, PACIFIC STEEL & RECYCLING

"I think the jury is still out" on Fusion, said Mark Scherer, IT manager at Flatiron Construction Corp. in Longmont, Colo. Flatiron runs the World green-screen applications that PeopleSoft acquired when it bought J.D. Edwards & Co. before being purchased by Oracle.

"Is the Fusion architecture a fit for us, or do we need to start looking at Tier 2 ERP vendors in the not-to-distant future?" Scherer wondered. At the same time, he said that Oracle has worked well with his company, leaving him positive about Flatiron's

Fusion, page 50

Vendors Vow to Help Users Manage Mixed Web Services

New tools, links between rival registries on tap

BY HEATHER HAVENSTEIN

Users grappling with the proliferation of Web services are demanding help in creating and enforcing policies to manage them, and upcoming vendor moves indicate that some relief is on the way.

Within the next two weeks, for example, SOA Software Inc. is expected to announce that it and other vendors have agreed to support Version 3 of the Universal Description, Discovery and Integration standard, which will let their now-proprietary service registries work together.

In addition, Software AG in Darmstadt, Germany, this week will unveil a suite of three products with a core registry and repository tool that focuses on managing the metadata of Web services within a service-oriented architecture and creating policies for their use.

Efforts like these target users such as Christopher Crowhurst, vice president and principal architect at Thomson Learning, a professional and academic testing company in Stamford, Conn.

Crowhurst said he spends 10% to 15% of his time each week working to create an en-

Web Services, page 50

Users: PLM Apps Lack Security

BY MARC L. SONGINI
CAMBRIDGE, MASS.

The spread of product lifecycle management applications may be slowed by manufacturers' need to safeguard crucial intellectual property.

BOLDT: Moog needs flexibility.

That was the message from PLM users attending DaratechSummit 2006 here last week.

Michael Boldt, engineering applications manager at Moog Inc., said that maintaining the security of intellectual property is

PLM, page 12

NEWSPAPER

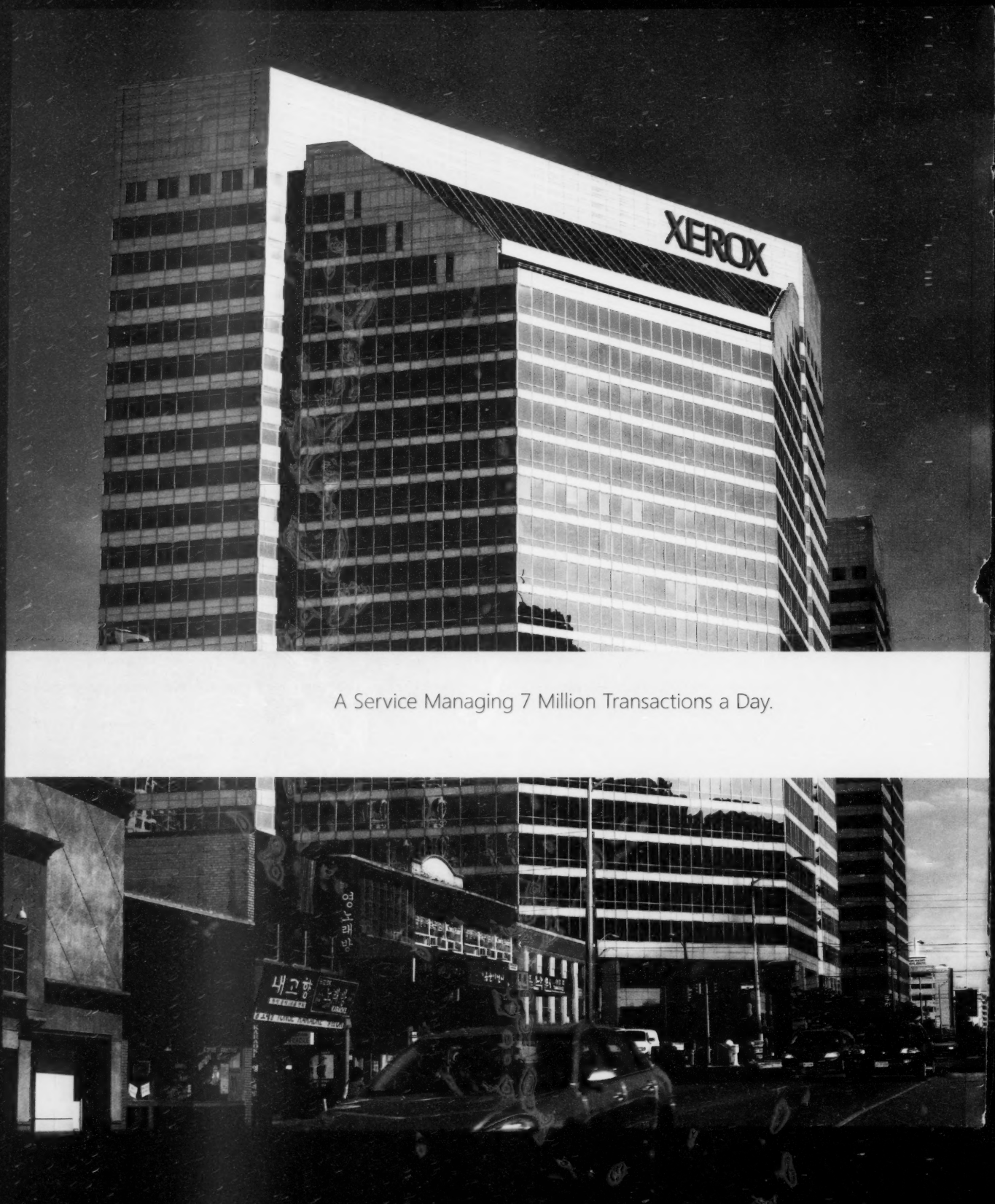
#BXBBJFT**********AUTO**5-DIGIT 48103
#0576350/CB/6# CW200609 001 16562
SHERI MARION 81
PROQUEST
MS 88
300 N ZEEB RD 75-19
ANN ARBOR MI 48103-1553

How does Xerox Global Services manage millions of office devices for its customers? Their largest application runs on new SQL Server™ 2005 64-bit running on Windows Server™ 2003, which provides 99.999% uptime*. See how at **microsoft.com/bigdata**

Microsoft®
Windows
Server System™

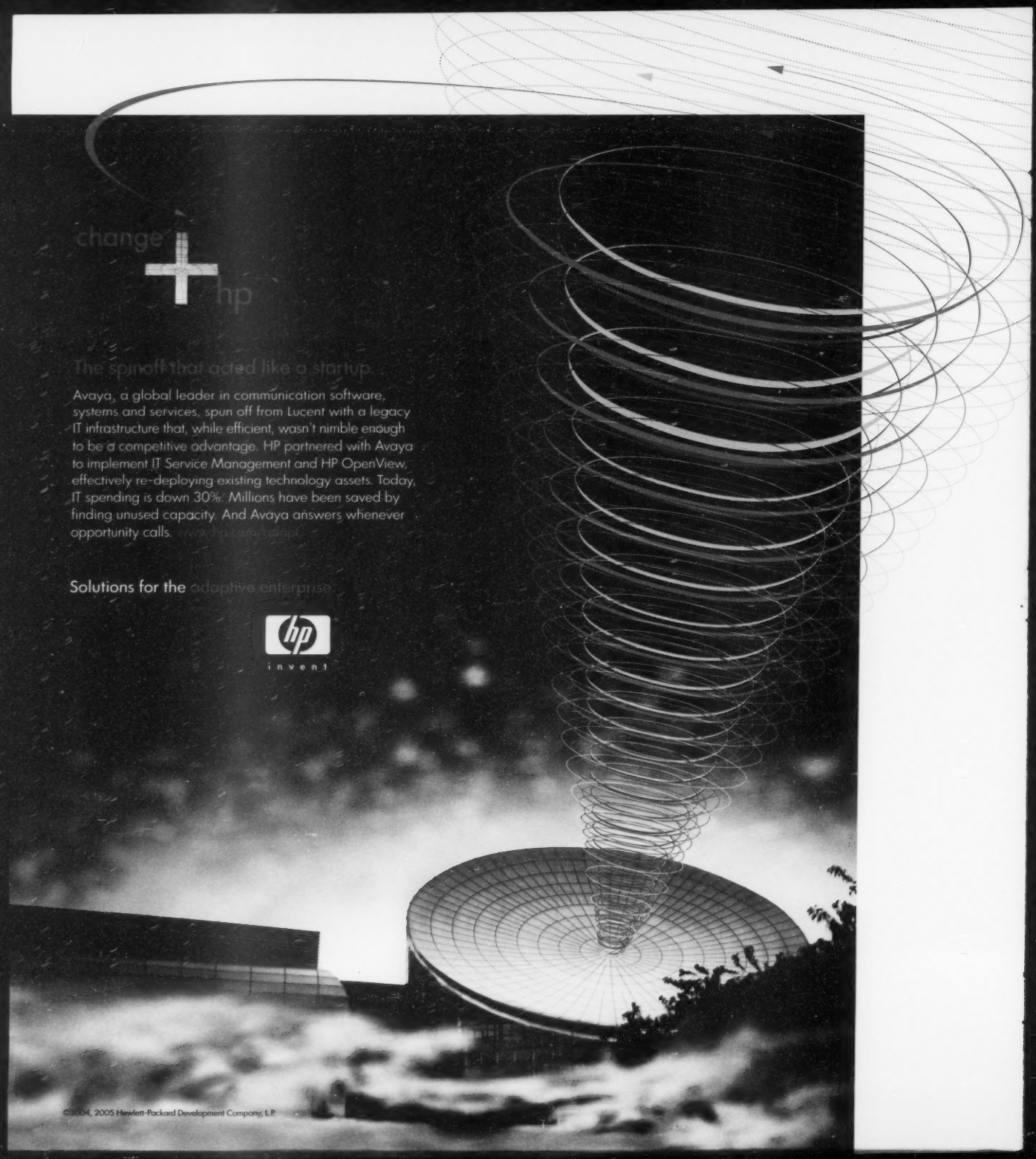
*Results not typical. Availability is dependent on many factors, including hardware and software technologies, mission-critical operational processes, and professional services. © 2005 Microsoft Corporation. All rights reserved. Microsoft, the Windows logo, Windows Server, Windows Server System, and "Your potential. Our passion." are either trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries. XEROX® is a trademark of XEROX CORPORATION.

A Service Managing 7 Million Transactions a Day.
Running on Microsoft SQL Server 2005.



A Service Managing 7 Million Transactions a Day.

Your potential. Our passion.
Microsoft


change
hp
The spinoff that acted like a startup.
Avaya, a global leader in communication software, systems and services, spun off from Lucent with a legacy IT infrastructure that, while efficient, wasn't nimble enough to be a competitive advantage. HP partnered with Avaya to implement IT Service Management and HP OpenView, effectively re-deploying existing technology assets. Today, IT spending is down 30%. Millions have been saved by finding unused capacity. And Avaya answers whenever opportunity calls. www.hp.com/adapt
Solutions for the adaptive enterprise.
hp
invent
©2004, 2005 Hewlett-Packard Development Company, L.P.

CONTENTS

02.27.06

Central Intelligence

In the Technology section: Consolidated business intelligence suites make sense for large organizations, say IT professionals like Jorge Basto of the Georgia Administrative Office of the Courts. But adoption has been slowed by users' comfort with their current BI point tools. **Page 27**

Drilling Down

In the Management section: Valero Energy has combined business intelligence technology and market prescience to become a profit leader in the oil industry. **Page 42**

NEWS

4 **Product choices** for WAN optimization grow as F5 Networks announces a software upgrade that supports the CIFS protocol.

4 **Dell loses** a $700 million IT services deal with Philips Electronics, which decided that a plan to create a single desktop environment worldwide wouldn't work.

8 **The United Arab Emirates** offers incentives to lure IT services firms to set up shop in Dubai.

8 **Oracle buys** another company that makes a storage engine for the MySQL open-source database.

10 **A normally secretive** SAP user group loosens up a bit in an effort to attract more members.

10 **Microsoft unveils tools** that are designed to improve integration between Office and its CRM and ERP applications.

12 **Global Dispatches:** Microsoft's rivals lodge another complaint against the software vendor with the European Commission.

16 **A rash of security breaches** involving mishandled data leads IT security executives to focus on safeguarding information against accidental leaks.

20 **Factiva** is installing wide-area file-sharing technology so IT staffers at headquarters can manage data files in 42 branch offices.

23 **The FBI** is investigating how a piece of potentially malicious software was loaded onto a state government server in New Hampshire.

TECHNOLOGY

30 **GPS Repositions for Business.** GPS capability is primarily found in consumer goods like cars, PDAs and cell phones, but the technology has matured, and it's increasingly being incorporated into enterprise applications.

32 **QuickStudy: Semantic Web.** This visionary project aims to enable computers to find, read, understand and use the content of Web documents to accomplish tasks via automated agents and Web-based services.

34 **Security Manager's Journal: Zero-Day Infection Is Headed Off Efficiently.** Mathias Thurman's team focuses on eradicating a virus but is frustrated by a slow response from the antivirus vendor — several hours is a long time in a zero-day attack.

MANAGEMENT

39 **IT Moves In – With the Business.** Top IT execs are putting their staffers to work alongside their business counterparts to develop a better understanding of problems and deliver better products.

44 **Managers' Forum.** Paul Glen has advice for project managers tired of taking the heat for lagging colleagues and unreasonable project schedules. Also, he discusses whether a manager really needs a technical understanding of what his people do.

45 **Career Watch.** Addressing the low number of women in IT; what makes an IT organization world-class; and the career side effects that CISOs experience if they report to someone outside the IT group.

OPINIONS

6 **On the Mark: Mark Hall** reports on a new book that claims that a CIO's management ideology can hurt IT projects.

24 **Don Tennant** thinks U.S. lawmakers pandered to an uninformed electorate by belittling Google and other U.S. companies for abiding by Chinese censorship laws in China.

24 **Virginia Robbins** outlines the best way to take advantage of an opportunity to make a presentation to the board of directors.

25 **Bruce A. Stewart** has seen progress in the role of the IT relationship manager, but it's IT itself that's holding back the position's potential.

36 **Mark Willoughby** says the story of computer graphics pioneer Evans & Sutherland is a cautionary tale for innovative start-ups.

46 **Barbara Gomolski** draws on more than a decade of telecommuting experience to offer suggestions for those who would run a virtual office.

52 **Frankly Speaking: Frank Hayes** can see the sense in server consolidation, but only if security is an essential part of the process. Case in point: one state government's foolish fiasco.

DEPARTMENTS/RESOURCES

At Deadline Briefs	4
News Briefs	6, 10
Letters	25
IT Careers	47
Company Index	49
How to Contact CW	49
Shark Tank	52

ONLINE

WWW.COMPUTERWORLD.COM

Network Policy Best Practices

NETWORKING: How should you go about devising and implementing a network acceptable-use policy? Sandra Gittlen clues you in as she introduces a new column devoted to best practices in networking. **QuickLink a8070**

Nokia Tablet: Smart and Sleek

MOBILE/WIRELESS: The stylish Nokia 770 Internet Tablet provides easy wireless access to e-mail and the Internet. But it may not be ready for enterprise users, since it's not overflowing with business applications. **QuickLink a8050**

Health Care Collides With the Enterprise

NETWORKING: The president's national coordinator for health IT envisions a national data network to improve health care. But users in the trenches have some tough questions, says columnist Bert Latamore. **QuickLink a8060**

Virtualization 101

OPERATING SYSTEMS: Red Hat engineer Brian Stein explains three different types of implementation and discusses the pros and cons of each. **QuickLink a8080**

E-mail Newsletters

Some of your favorite *Computerworld* e-mail newsletters are going daily! Our Security Update, Networking, and Viruses and Vulnerabilities newsletters will now appear in in-boxes every weekday — streamlined, timely and to the point. In addition, the Web Site Management newsletter will appear twice weekly. You can sign up online at **www.computerworld.com/newsletters**.

ONLINE DEPARTMENTS

Breaking News	computerworld.com/news
Newsletter Subscriptions	computerworld.com/newsletters
Knowledge Centers	computerworld.com/topics
The Online Store	computerworld.com/store

AT DEADLINE

U.S. Judge Delays BlackBerry Decision

A federal judge stopped short of ordering a shutdown of BlackBerry wireless e-mail devices in the U.S. after a court hearing on Friday, but he reiterated that vendor Research In Motion Ltd. has infringed patents held by NTP Inc. Judge James Spencer also said he is skeptical of RIM's claim that a BlackBerry shutdown would hobble critical public services. He said he will decide on NTP's request for an injunction against RIM "as soon as reasonably possible."

Court Denies Execs' Dismissal Motion

A U.S. District Court judge has denied a motion to dismiss obstruction of justice charges against former CA Inc. CEO Sanjay Kumar and Stephen Richards, another former executive at CA. The two are accused of fraudulent accounting practices, including falsely reporting hundreds of millions of dollars in revenue.

Microsoft Says That Korean Fine Is Unfair

The South Korea Fair Trade Commission's December decision to fine Microsoft Corp. and order it to offer two different versions of Windows is not supported by facts and will have "a negative effect on Korean consumers and Korean innovation," the company said. Microsoft is appealing the commission's fine of 33 billion won ($34 million U.S.) and the Windows order.

CardSystems Makes Breach Settlement

CardSystems Solutions Inc. has agreed to a settlement with the U.S. Federal Trade Commission, which alleged that the company failed to protect consumer data by allowing a hacker to access as many as 40 million credit card numbers. The settlement requires CardSystems, now a unit of Pay By Touch Inc., to adopt stricter security measures and have biannual independent audits for the next 20 years.

Competition Grows Among WAN Optimization Vendors

F5 adds upgrade of acquired software, support for CIFS

BY MATT HAMBLEN

THE PRODUCT choices continue to expand for users seeking devices that can boost the performance of file sharing via the Common Internet File System (CIFS) protocol.

F5 Networks Inc. today plans to announce a software upgrade that includes CIFS acceleration capabilities for its line of WAN optimization appliances. The added feature should vastly reduce the latency involved in transferring Windows-based files, tripling or even quadrupling the transfer speeds provided by the WANJet appliances, said Ameet Dhillon, director of product management at F5.

The Seattle-based company acquired the WANJet line when it bought Swan Labs Inc. last September. Due March 15, the WANJet 4.0 upgrade will be the first version of Swan's software that is integrated with F5's other application management products at the user-interface level, Dhillon said.

Analysts said F5 is joining a growing list of vendors offering wide-area file services (WAFS) products that can replace file servers in branch offices and help companies back up data for regulatory compliance purposes.

Navio Systems Inc., a vendor of digital rights management software in Cupertino, Calif., has been beta-testing WANJet 4.0 and plans to deploy the software on two appliances in the next 45 days. The devices will support operations in Europe and Asia and may also be used to replace conventional file servers at various locations globally, said Will Lee, director of operations at Navio.

Navio currently uses WANJet 3.0 for large data backups across a dedicated T1 line in the San Franciso area. After the company installed the technology, backup times were reduced from three days to five hours, Lee said. He added that the CIFS acceleration is expected to improve speeds on global connections.

"CIFS is an incredibly chatty protocol," said Joe Skorupa, an analyst at Gartner Inc. Skorupa said there can be hundreds of CIFS transactions running back and forth across a network at the same time. They may take 1 msec each on a LAN but 200 msec over a WAN, he noted.

Skorupa predicted that some companies will use WAFS technology to completely eliminate file servers in their branch offices, in some cases ripping out thousands of systems and replacing them with appliances like WANJet. "There will be very large implementations," he said.

But Skorupa added that IT managers need to spend as much time as possible evaluating the management functions in WAN acceleration products before installing them.

"Once [they're] in the network, you'll be completely dependent on them," he said. "If [one] fails, you need to know what the implications are to the business processes."

Riverbed Technology Inc. is the leading vendor of CIFS acceleration appliances, according to Skorupa and Joel Conover, an analyst at Current Analysis Inc. in Sterling, Va. But Riverbed has plenty of competition. Like F5, both Cisco Systems Inc. and Juniper Networks Inc. have entered the market through acquisitions over the past two years.

Orbital Data Corp. added CIFS support to its WAN appliances in November, following a similar move by Expand Networks Inc. last August. ▸

TECHNOLOGY DETAILS

F5 bundles WANJet software with two appliances:

WANJET 200

For branch offices, supports 2,000 concurrent connections and transfer rates of up to 2Mbit/sec.

WANJET 400

For data centers, supports up to 10,000 concurrent connections and maximum throughput of 622Mbit/sec.

Pricing: Starts at $1,795 per device, with two required to create a network link.

Availability: WANJet 4.0 is due to ship March 15.

MORE WAFS NEWS

Business information provider Factiva uses WAFS technology to replace tape-based data backups at its branch offices. **Page 20**

Dell, Philips Cancel IT Deal Worth $700M

BY ELIZABETH MONTALBANO AND TODD R. WEISS

Dell Inc. last week confirmed it has lost an IT services deal with Philips Electronics NV that was valued at up to $700 million over five years.

The Dell contract for a project called Global Workplace was canceled after Philips determined that its goal of creating a centralized desktop environment for its worldwide workforce was unfeasible, said Jason Otke, a spokesman for Amsterdam-based Philips.

"Through the development work, it was concluded that the global one-size-fits-all strategy was not the ideal approach," Otke said. "The lesson from this is that we need to reflect the regional needs of our businesses."

He said the decision was made after a review of the project by both companies to find out whether it could adequately support end users. Ultimately, there were more questions than answers about what approach would work worldwide, he said, adding that Philips officials now are evaluating how the company should proceed in providing desktop services to its users.

The cancellation of the pact "was mutually agreed upon by both companies" a year after Dell began providing hardware and services to Philips, said Bob Kaufman, a spokesman for the IT vendor.

Dell was awarded the five-year contract to manage desktop computers, printers, office networks and applications, and provide technical assistance for 75,000 employees at Philips in December 2004.

Dell has been looking to boost its services business outside North America in recent years to help offset a slowdown in the growth of its core hardware business.

The conclusion by Philips officials that the one-size-fits-all desktop strategy wouldn't work is understandable, said Charles King, an analyst at Pund-IT Inc. in Hayward, Calif.

"Their reasoning sounds valid," he said, as company officials realized that business units in different countries likely have different needs. ▸

> "It was concluded that the global one-size-fits-all strategy was not the ideal approach. The lesson from this is that we need to reflect the regional needs of our businesses."
>
> **JASON OTKE**, SPOKESMAN, PHILIPS ELECTRONICS

Montalbano is a reporter for the IDG News Service.

RUNNING INTO ROADBLOCKS TRYING TO ACCELERATE BUSINESS PROCESSES?

FileNet Business Process Manager removes barriers to improved business performance.

Manual processes limit productivity, increase costs, slow customer response times, and hinder compliance. FileNet Business Process Manager streamlines and automates critical processes to optimize operations and improve your ability to make better decisions, faster. It's a proven solution that delivers rapid ROI and easily scales to meet your unique business requirements.

Track, analyze, simulate, and fine-tune complex processes in real time. Identify productivity obstacles, improve customer service and increase efficiency. With FileNet Business Process Manager, the path to improved performance is clear.

Find out why more than 1,600 companies depend on FileNet's process management solutions. Go to www.filenet.com/bpm

FILENET®

©2006 FileNet Corporation. All rights reserved.

1-800-filenet www.filenet.com

BRIEFS

PC Maker Files Suit Against Microsoft

Tangent Computer Inc. has filed a civil suit in U.S. federal court accusing Microsoft Corp. of violating antitrust laws. The Burlingame, Calif.-based maker of specialized PCs alleges that Microsoft employs practices "to prevent and destroy competition" while charging "artificially inflated prices" for its software. The lawsuit charges that the tactics violate the Sherman Antitrust Act.

SCO Group Shuffles Management Duties

The SCO Group Inc. has reshuffled the responsibilities of its management ranks. President and CEO Darl McBride will now focus on SCO's strategy and vision while passing on day-to-day responsibilities for the company's operating units to Tim Negris, the former vice president of sales. Negris was promoted to executive vice president of sales and marketing.

Micron Files Lawsuit Against Rambus

Micron Technology Inc. stepped up its legal battle with Rambus Inc., filing a lawsuit last week that accuses the chip technology vendor of violating U.S. organized crime laws. The lawsuit comes a month after a Delaware judge allowed Rambus to move ahead with an ongoing patent-infringement lawsuit against Micron. The two companies have been engaged in the dispute since 2000.

Netifice Buys VPN Maker MegaPath

Netifice Communications Inc. has agreed to acquire rival virtual private network systems maker MegaPath Networks Inc. for an undisclosed price. The transaction also calls for $35 million in additional funding from existing investors of both companies. The combined company claims more than $125 million in annual revenue.

ON THE MARK

HOT TECHNOLOGY TRENDS, NEW PRODUCT NEWS AND INDUSTRY BUZZ BY MARK HALL

DAVID CLARK

Evidence-based IT Improves a . . .

. . . team's odds for a project's success. Nothing sounds more obvious than nailing down the pertinent facts before venturing into an IT project. Yet it happens less often than you'd think, according to Stanford University professors Jeffrey Pfeffer and Robert I. Sutton, authors of *Hard Facts, Dangerous Half-Truths & Total Nonsense: Profiting From Evidence-Based Management*, to be published next month by Harvard Business School Press. The book is chockablock with examples of corporate executives running amok with fixed ideas about how the world ought to be as opposed to how it is. You'd think the bits-and-bytes reality of IT would be exempt, but you'd be wrong, says co-author Sutton. "IT is incredibly ideological," he says, noting the hard-core beliefs some IT managers have about, say, Linux vs. Windows. And, he says, workplace ideologies often conspire against projects at two levels. First, he says, CIOs don't always "calculate the real costs and real risks of big IT projects," such as ERP deployments. Often, Sutton argues, they just see the benefits to the company and "are a bit too overconfident in their own abilities." Second, he says, some CIOs ignore the past success of project teams when starting a new endeavor. He claims studies show that the No. 1 factor in a project's success is the experience that a team has working together. Too often IT execs mix up a team with new talent that undermines the chemistry that made it successful. Says Sutton, "In an era of distributed development teams, if you have a successful team, why would you break it up?"

PFEFFER and SUTTON: Get the facts, Jack.

Team creation: Is it a science . . .

. . . or is it an art? Sutton claims it's a bit of both, but Adam Miller argues you can turn it into more of an exact science with the right tools. His, of course. He's the CEO of Cornerstone OnDemand Inc. in Santa Monica, Calif., which offers its eponymous service for companies that want quantifiable measurements of worker performance, as well as career tracking and development. Miller claims that with the right data on IT staff members, a manager can assemble the best team for a project by simply telling the system what skills are necessary to get the job done. (It doesn't account for personality quirks.) The Cornerstone OnDemand service will deliver a list of those with the necessary talents. Miller claims that identifying team member skills is increasingly difficult, especially in large IT shops, because of such new realities as offshoring and the rapidly disappearing talent of baby boomers. The service starts at $30 per user per year.

MILLER: Use system to pick IT teams.

'Disks are cheaper than . . .

. . . toilet paper." That's the observation of Nien-Ling Wacker. She's the CEO of Long Beach, Calif.-based Compulink Management Center Inc., which has done business since 1987 as Laserfiche. She calculates that it costs .00005 cents to store a document image on disk drives today, whereas a single sheet of two-ply TP runs .0004 cents. If disk drive makers move into the custodial business, she quips, there could be "paperless toilets." But it's a good thing for Laserfiche that the so-called paperless office never came to fruition, because there would be no need for its document management system. Laserfiche's tools scan in documents, and its QuickField software uses pattern recognition to populate and index templates for easy document storage and retrieval. You can even use QuickField to move stored documents into new forms for compliance and other purposes. Wacker says next year QuickField will add workflow capabilities. Pricing starts at $2,500.

WACKER: Disk space is cheaper than two-ply.

Develop intelligence into . . .

. . . real-time events. If you are building applications that are fed by vast and rapid streams of data, such as credit card processing, radio frequency identification and network security systems, you're a candidate for the emerging field of event-stream processing development. Or so hopes Mark Palmer, vice president of event stream processing at Progress Software Corp. in Bedford, Mass. He argues that most programmers "need a new attitude, a new way of thinking" when it comes to creating applications that apply intelligence in real time to these environments. "It's not the query and response thinking" of traditional business intelligence, he says. He claims the breakthrough that Progress made was the ability to overcome the "temporal constraints" on multiple patterns in real-time data with its Apama Event Processing Language. Progress ships a suite of tools that are designed to let you model, store and correlate events so you can detect patterns in the data in real time. It ships a specific module called a smart block for equity trades and later this year will ship another module, though Palmer would not say whether it would be for fraud detection, security or RFID applications. ▸

PALMER: Real-time BI is possible.

Treat secure storage as a priority.

(And you won't have to treat lost data as a tragedy.)

QLogic SAN Connectivity Kit 3000

- Offers a turnkey storage area network
- Designed for high I/O applications
- Includes a SANbox 5200 Fibre Channel switch, 4 SANblade 2340 Fibre Channel HBAs, SANsurfer Management Suite CD, cables and small-form factor pluggables
- Offers support for Windows® (XP, 2000, WinServer2003), Solaris, Linux®, and Netware environments

qlogic Simplify™

$6473.99
CDW 627882

Overland NEO 2000™ LTO-3 Library

- Increases the efficiency of backup/restore applications in small to medium-sized organizations
- Protects your investment by scaling to accommodate rapidly-growing storage needs
- Reduces installation costs by easily connecting into a variety of SAN and direct-attached environments (SCSI standard)
- Supports 30 LTO-3 cartridges (up to 24TB) and 2 tape drives (up to 1TB/hour), rack-mount. Available with LTO-2 and SDLT600.

Overland STORAGE

$10,809.99
CDW 756497

EMC NS500

- Consolidate your file servers, application servers, Microsoft applications and storage from a single device
- High-performance NAS at a mid-tier price—with full IP (iSCSI) support and flexible storage (FC and ATA drives)
- Leverages the sixth generation of innovative CLARiiON® Fibre Channel RAID storage, delivering availability and data protection, along with Celerra's availability, performance and ease of management.

EMC² where information lives

Call

The Storage Solutions You Need When You Need Them.

Today, with more data being stored, more assets are at stake. And there is a big difference between storage and secure storage. CDW has storage and backup specialists that will work with you to find the right solution for your set up. Then, we'll draw from a full line of top-name storage technology so you can increase capacity and reduce risk. So call today and make sure your data and your company are secure.

CDW

The Right Technology. Right Away.

CDW.com • 800.399.4CDW

In Canada, call 888.898.CDWC • CDW.ca

Offer subject to CDW's standard terms and conditions of sale, available at CDW.com. © 2006 CDW Corporation.

Dubai Seeks IT Business In Addition to U.S. Ports

United Arab Emirates wants city to be an attractive outsourcing destination

BY PATRICK THIBODEAU

THE United Arab Emirates is at the center of a political controversy in Washington over whether a company based in the Persian Gulf should be allowed to take over terminal operations at six U.S. ports. But the UAE has its sights set on more than ports: It also wants Dubai, its largest city, to become a major center for IT outsourcing.

The UAE's government has been building a modern infrastructure in Dubai and clearing away all taxes and visa hurdles in an effort to encourage companies to set up IT operations there, said Mehtab Ali Sayed, director of marketing at Madar Research Group FZ-LLC, a Dubai-based market research firm. "They are positioning themselves against India," he said.

Existing Presence

Many U.S. IT vendors already have offices in Dubai, primarily to support customers in the Persian Gulf region. Among them is Sierra Atlantic Inc., a Fremont, Calif.-based offshore IT services firm that opened an office in Dubai last August.

"Compared to India, it is expensive," said Sierra Atlantic CEO Raju Reddy, noting that labor costs in the UAE can be as much as 50% more than they are in India, where his company has the bulk of its operations. Moreover, "there is not sufficient local talent in Dubai," Reddy said.

Nonetheless, he added, the city will be an important base for supporting customers and delivering high-end IT architecture and design services.

Thus far, the UAE has barely made a ripple in the outsourcing market. And despite its oil riches, handsome office parks and lack of taxes, the tiny country faces challenges beyond the issues of cost and its limited labor pool.

The contentious move by Dubai Ports World, a state-owned company, to acquire The Peninsular and Oriental Steam Navigation Co. in London for $6.8 billion further illustrates the UAE's efforts to diversify its economy. The port deal would put DP World in charge of terminals at the ports in New York, Philadelphia, Baltimore, New Orleans, Miami and Newark, N.J. But if the deal falls through, it could prove to be a problem for the UAE's plan to become an IT outsourcing hub.

"If there is a reversal of a major business deal, I would assume that will cause people to take a cautionary view with regard to where and how they can do business," even with IT outsourcing vendors, said Jane Siegel, director of the Information Technology Services Qualification Center at Carnegie Mellon University's School of Computer Science in Pittsburgh.

Although routine IT support isn't likely to get the political attention that the port agreement is receiving, "you can make the case that if [outsourcing vendors] are handling anything that involves strategic or sensitive data transactions, that could be a concern," Siegel said.

THE UAE has lowered tax and visa barriers to help lure IT firms to Dubai.

The UAE is considered an ally of the U.S., but the port takeover has met with vocal opposition from members of Congress who are upset about plans to allow a company from a hostile region to manage U.S. facilities. The White House, though, has said it won't allow the deal to be blocked.

Despite the limitations of the UAE's labor pool and the geopolitical risks, IT services firms focusing on the Middle East and West Africa "see Dubai as an excellent location for basing regional operations," said Atul Vashistha, CEO of NeoIT.com Inc. in San Ramon, Calif. Vashistha said Dubai wants to establish itself as the Singapore of the Middle East.

Rita Gunther McGrath, an associate professor of management at Columbia University's business school in New York, has been advising Ireland on attracting foreign investments. She said the Irish government sees the UAE as a potential rival for IT-related work.

McGrath, who has visited Dubai, described the UAE as a relatively friendly country that is technology-savvy and has "an appetite for modernity."

Oracle's Sleepycat Purchase Doesn't Rile MySQL Users

Berkeley DB buy worries users less than prior deal

BY ERIC LAI

Oracle Corp. this month bought Sleepycat Software Inc., its second acquisition in the past five months of a company offering technology that can be used as a storage engine for the MySQL open-source database.

But the purchase of Lincoln, Mass.-based Sleepycat isn't prompting the same level of concern among MySQL users as did Oracle's October purchase of Innobase Oy in Helsinki, Finland. Innobase's InnoDB software is used much more widely with MySQL than Sleepycat's Berkeley DB is, according to users and analysts.

Many users fretted that Oracle bought Innobase simply as a hostile move against MySQL, said John Abbott, an analyst at The 451 Group in New York. "It was hard to see why Oracle did it other than to screw up MySQL," he said.

Sleepycat claims that there have been more than 200 million deployments of Berkeley DB. The software is embedded in open-source products such as the Linux and BSD Unix operating systems, the Apache Web server, the OpenLDAP directory and the OpenOffice application suite.

Deployment Limited

But Berkeley DB hasn't been widely adopted by MySQL users, said Jeremy Cole, a former MySQL AB employee who now helps oversee about 8,000 installations of the open-source database at Yahoo Inc.

"The BDB storage engine was added to MySQL in the early days as a prototype for adding transactional support," Cole said. "InnoDB came along shortly afterward and quickly surpassed BDB in usefulness, speed and features. No one has looked back since."

Software Trio

Oracle said it plans to market its three embedded databases for different uses.

- Berkeley DB: Aimed primarily at applications in network routers and gateways, network management systems, and security and search appliances.
- TimesTen: An in-memory database designed to support dynamic queries and do real-time data caching for Oracle's relational databases.
- Oracle Lite: Designed to support single-user applications running on mobile devices.

Boyd Hemphill, an Austin-based MySQL administrator for the Texas state government, concurred with Cole's point of view. Berkeley DB "was never fully supported [on MySQL], and I'm unaware of anyone using it in production," Hemphill said. "Oracle's purchase of InnoDB was much more shocking [and] troubling because it was a much better-supported engine."

Oracle said in documents posted on its Web site that there "currently are no plans to discontinue any of Sleepycat's products." Berkeley DB will be marketed for network edge applications, according to Oracle, which said the software will be a companion product to its existing TimesTen and Oracle Lite embedded databases (see chart).

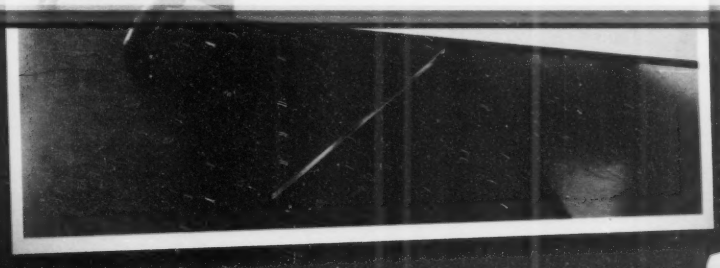
The company added that it will maintain Sleepycat's dual-license approach by offering commercial licenses for Berkeley DB and making it available to open-source developers. In a similar vein, Oracle said last fall that it expected to negotiate an extension of Innobase's contract with MySQL, which expires this year.

In addition to the acquisitions of Innobase and Sleepycat, Oracle last June bought TimesTen Inc., developer of the TimesTen database. Noel Yuhanna, an analyst at Forrester Research Inc., said Oracle is trying to embrace embedded and open-source databases — technologies it previously avoided as potential distractions or products that could cannibalize sales of its core databases.

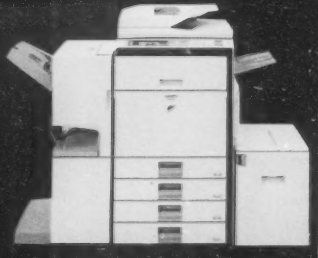
SHARP

©2006 Sharp Corporation

Any MFP can print colorful growth charts.
How many can actually help you achieve them?



INTRODUCING THE SHARP MX-SERIES. Thanks to the revolutionary Open Systems Architecture, these multifunction products seamlessly integrate with your network to keep up with your growing business. They also deliver outstanding color and enhanced productivity. No wonder Sharp MFPs won the BLI award for "IT Friendliness." To start your own renaissance of color, visit sharpusa.com/documents



COLOR • PRODUCTIVITY • SCALABILITY • SECURITY

ENERGY STAR

As an ENERGY STAR® Partner, Sharp has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

Color
Scan²
Security
Scalability

BRIEFS

IBM Seeks Data in Battle With SCO

IBM has requested that Hewlett-Packard Co., Microsoft Corp., Sun Microsystems Inc. and BayStar Capital Corp. turn over documents to help in its long-running legal battle with The SCO Group Inc. IBM filed the orders for documents related to communications between the companies and SCO concerning Unix source code. The dispute dates back to 2003, when SCO charged IBM with using source code that SCO claims to own.

Sun Buys Patch Tool Maker Aduva

Sun has agreed to acquire patch management specialist Aduva Inc. for an undisclosed sum. Aduva's OnStage software helps automate the deployment of software patches to Linux- and Solaris-based computers. Sun will offer Aduva technology as part of the Sun Grid hosted software service and as a stand-alone enterprise tool. The deal is expected to close by midyear.

Georgia Awards IBM $3M Services Pact

IBM has been awarded a contract worth about $3 million to manage the IT assets of the state of Georgia. The deal also calls for IBM to manage the state's vehicles and facilities. The Commission for a New Georgia estimated that the deal could save more than $35 million in asset- and fleet-management costs over the next four years.

Microsoft Ships E-commerce Beta

Microsoft has started shipping a test version of the next release of its e-commerce software, slated for general availability in July. The new version of Microsoft Commerce Server 2006, the first to ship since 2002, includes adapters from Microsoft's BizTalk Server integration software that can link e-commerce systems with back-end financial applications, such as those from SAP AG or J.D. Edwards.

SAP User Group Opens Up To Attract New Members

ASUG officials look to draw more customers in the U.S., Latin America

BY CHINA MARTENS

THE NORMALLY secretive Americas' SAP Users' Group is opening its doors a crack in an effort to attract more SAP users to its ranks.

"We're definitely in growth mode," Mike Perroni, president of ASUG, said in a recent phone interview.

The user group, founded in 1990, has been more guarded than others in recent years, with officials generally unwilling to comment publicly on SAP issues.

Perroni, who is also vice president of IT at energy services provider Halliburton Inc. in Houston, said the group decided to speak up in the hopes of boosting membership.

ASUG counts more than 45,000 individuals and over 1,300 customer and partner companies among its members, according to Perroni.

"The user group has always been the best-kept secret in the entire SAP ecosystem," said Rod Masney, executive vice president of ASUG. Masney is also global information and technology architect at Owens-Illinois Inc. (O-I), a glass packaging company in Toledo, Ohio.

On the Right Track

David Dobrin, an analyst at B2B Analysts Inc. in Cambridge, Mass., applauded ASUG's effort to be more vocal and try to attract more members.

"ASUG has been a reasonably effective organization," Dobrin said last week. "They've been able to balance all the conflicts pushed onto it in an OK way."

However, he did note that users should be more aggressive in their efforts to get vendors to meet their needs.

"Customers of application vendors are the most supine and forgiving," Dobrin said, noting that, in general, ERP and CRM users put up with vendor behavior that consumers wouldn't tolerate, particularly the delivery of poorly tested, buggy software.

> **"The user group has always been the best-kept secret in the entire SAP ecosystem."**
>
> **ROD MASNEY,** EXECUTIVE VICE PRESIDENT OF ASUG AND GLOBAL INFORMATION AND TECHNOLOGY ARCHITECT AT OWENS-ILLINOIS INC.

The top concern of the independent, nonprofit, volunteer-run entity is ensuring return on investment for SAP users and that the vendor provides strong support services, ASUG officials said.

Perroni said another of ASUG's primary missions is to help customers decide when to update installed SAP software.

In Halliburton's case, an update from MySAP 2004 to MySAP 2005 is planned for 2007, Perroni said.

Halliburton has one of the largest global installations of SAP's enterprise applications, with 30,000 users at 350 field operations in more than 100 countries.

O-I, meanwhile, has started work on a global rollout of MySAP ERP 2004. It is starting in Europe and moving to the Asia-Pacific region, where it has been using the older R/3 4.6 ERP application.

Mover and Shaker

The user group has long been a prime mover in influencing SAP to continue supporting older releases of its software so users aren't forced to "rush off" a particular version, Perroni said. "You don't hear much noise [from users] about moving to the next release," he said.

ASUG isn't always happy with the speed at which SAP releases certain components of its software, according to Perroni, but he ranked that failing as a "pretty minor" criticism.

User group members also fueled a move to collocate ASUG's annual user conference alongside SAP's Sapphire 06 U.S. event in Orlando starting May 14. ASUG members had raised concerns over the timing of the individual events, which are typically held about a month apart.

Martens is a reporter for the IDG News Service.

New Microsoft Tools Link Outlook and Applications

Dynamics Snap programs aim to more tightly integrate processes

BY MARC L. SONGINI

Microsoft Corp. last week rolled out a line of integration tools that it said can more tightly weave together its business applications with the Office productivity suite.

The new Dynamics Snap line of tools, called Snap-Ins, will enable users to trigger workflows or access data in the AX 3.0 (formerly Axapta) ERP and Microsoft CRM 3.0 systems through Microsoft's Outlook personal information manager.

Microsoft said the four Dynamics Snap tools, built under the code name Project Green, can be used to eliminate redundant data entry, boost productivity and more tightly integrate the business processes of multiple Microsoft applications.

Product Offerings

Helene Cole, CEO of Altara, a Basking Ridge, N.J.-based integrator, said the updated tools promise to eliminate the time-consuming task of having to enter the same data into Outlook and a corporate AX ERP or Microsoft CRM system.

Cole described the Dynamics Snap offerings as the first wave of technology that aims to solve the problem of redundant data entry between ERP and other systems, such as e-mail. Microsoft currently embeds similar integration tools in its GP 9.0 ERP software and offers stand-alone tools called Portal Lite for its SL ERP package, said James Utzschneider, general manager of marketing at Microsoft's Business Solutions unit.

The four new tools for AX 3.0 and Dynamics CRM 3.0 are the first branded under the Snap-In name, Microsoft said.

The new Dynamics Snap tools include Timesheet Management Snap-In, which can link appointments or meetings scheduled in Outlook to AX; Vacation Management Snap-In, which lets end users submit time-off requests through Outlook; Business Data Lookup Snap-In for AX, which can be used to find information in AX through the Office interface; and Business Data Lookup Snap-In for CRM 3.0, a lookup tool for CRM software.

The company plans to add to its list of Snap-In tools but will wait for user feedback to determine what type of tool will be developed next and when it will ship, according to Utzschneider.

intel
Leap ahead
with Intel built in, Bumrungrad has
expansion built in
STORAGE ROOM TRANSFORMED INTO PEDIATRIC CLINIC. Bumrungrad Hospital, Southeast Asia's largest healthcare facility, created a kid-friendly pediatric clinic out of a 10,000-square-foot medical records unit. How? An ultra-scalable, 4-way Intel® Xeon® processor-based system improved data reliability and made records paperless. Read more about Bumrungrad Hospital's experience with Intel built in at intel.com/builtin.
intel
Xeon
inside

GLOBAL DISPATCHES An International IT News Digest

Microsoft Rivals File New Complaint With EC

SOME OF Microsoft Corp.'s biggest rivals last week lodged a new complaint with the European Commission, contending that the company's business practices are shutting out competitors.

A coalition called the European Committee for Interoperable Systems (ECIS), which includes IBM, Nokia Corp., Oracle Corp. and Red Hat Inc., made a formal complaint to the commission over a "range of products present and future." The products include the Office suite and the upcoming Windows Vista operating system.

The complaint cited Microsoft's refusal to disclose interoperability information for its Office suite, which would allow stronger links with competing products such as OpenOffice and StarOffice, said ECIS attorney Thomas Vinje. "This has crucial implications for Linux on desktops," he said.

Microsoft dismissed the charges. "ECIS is a front for IBM and a few other competitors who constantly seek to use the regulatory process to their business advantage," the company said.

■ SIMON TAYLOR, IDG NEWS SERVICE

GLOBAL FACT

€30.6M

Venture capital investment in Ireland during the fourth quarter of 2005. All four deals in the quarter funded IT projects.

SOURCE: ERNST & YOUNG/DOW JONES VENTUREONE QUARTERLY EUROPEAN VENTURE CAPITAL REPORT

Tokyo Exchange to Study U.S., European IT

TOKYO

OFFICIALS FROM Tokyo Stock Exchange Inc. will visit major U.S. and European stock market operators early next month to try to learn ways to better manage their own IT systems.

The exchange decided last month to restructure its IT systems following a string of computer breakdowns, Tokyo Stock Exchange Chairman Taizo Nishimuro told the American Chamber of Commerce in Japan in a speech here last week.

IT problems were blamed for brief trading shutdowns in November and January.

Officials will visit "the New York Stock Exchange, Nasdaq and other exchanges [to find out] how we can accommodate the Japanese customers and international customers with one single computer system," Nishimuro said.

■ MARTYN WILLIAMS, IDG NEWS SERVICE

Audit Finds Australian Agencies Lack Security

SYDNEY

AN AUSTRALIAN National Audit Office (ANAO) management review of IT security released late last year found that some government agencies have not implemented effective security policies.

The ANAO audit assessed eight agencies and determined that only two, not identified in the report, have so far implemented processes that can assess the security of internal IT systems and manage exceptions and variations. The remaining agencies, particularly those that contract IT services to third-party firms, do not maintain key security procedures and configuration documentation, the ANAO said.

Kumar Parakala, global chief operating officer for information risk management at KPMG International, said the "deficiencies would have a direct impact on the service delivery of the government."

The agencies mostly agreed with the ANAO's suggestions to improve security processes and create standards. ▸

■ DAHNA McCONNACHIE, COMPUTERWORLD TODAY (AUSTRALIA)

Compiled by Mike Bucken.

Briefly Noted

STMicroelectronics NV, a Geneva-based semiconductor manufacturer, last week said it will invest $30 million (U.S.) in its Indian operations over the next two years. STMicroelectronics is also hiring 300 engineers for its chip design center in Noida by the end of this year as part of a plan to boost its Indian workforce from 1,500 to 5,000 by 2010.

■ JOHN RIBEIRO, IDG NEWS SERVICE

Wipro Ltd. has acquired Sunnyvale, Calif.-based cMango Inc., a consulting company that helps businesses streamline and improve their services operations, for $20 million (U.S.) in cash. CMmango will become part of Wipro Technologies, the Bangalore-based services firm's global IT division. CMango provides consulting for BMC Software Inc.'s Remedy and Marimba products.

■ JAMES NICCOLAI, IDG NEWS SERVICE

Opera Software ASA is setting up a development center in Chandigarh in northern India that will employ quality assurance testers who will support all Opera products. A spokesman for Oslo-based Opera, which makes the Opera Web browser, said the operation will employ about 12 people in the first year.

■ JOHN RIBEIRO, IDG NEWS SERVICE

Continued from page 1

PLM

vital to manufacturers, both to comply with government regulations and to ensure that corporate secrets don't spread to competitors.

Moog, an East Aurora, N.Y., manufacturer of precision parts for military, aerospace and industrial customers, now uses a tool that supports basic intellectual property assignment rights, but it will soon need "a much more flexible system" as it upgrades its manufacturing capabilities, Boldt said. He described the current tool as a heavily customized application based on the Teamcenter Engineering PLM product from USG Corp. in Chicago.

Moog wants a more flexible IP access system to enable engineers to rapidly share data with colleagues around the world, Boldt said. Some of the company's partners are in countries that lack strong intellectual property protections, he noted.

The manufacturer is seeking a system with sophisticated security rules that can do things such as produce computer-aided design models of products, which can be shared with partners while hiding proprietary embedded calculations, Boldt said.

He said the company is considering whether to buy or build such a product, but he is unsure whether a packaged PLM system that meets Moog's needs exists today.

Joed Dougherty, PLM manager at Boeing Integrated Defense Systems' Rotorcraft division in Philadelphia, said his company has protected its intellectual property by limiting access to PLM data mostly to secure military customers.

Rotorcraft's PLM system is also based on Teamcenter Engineering and is used in engineering, planning, procurement and manufacturing operations.

Dougherty said sharing confidential data with partners and suppliers is restricted by U.S. International Traffic in Arms Regulations. For example, he said, outside access to his unit's intellectual property would necessitate passage though a secure Web-based portal that requires a government-cleared user ID and password.

Even inside Boeing's firewalls, the PLM application has a proprietary set of role-based access policies that further limit what a user can see, Dougherty said.

Guarding Jewels

PLM technology enables widespread collaboration but can be limited for the following reasons:

- Some countries are barred by law from receiving military-related intellectual property.
- Too much security can crush innovation.
- Too little security can lead to the spread of competitive secrets.
- Some partners may not have enough IT resources to ensure that networks are secure.

Meeting Challenges

Charles Foundyller, CEO of research firm Daratech Inc., which sponsored last week's conference, said companies face significant challenges in their efforts to protect intellectual property. The ability to share electronic design data with suppliers and customers around the world has become commonplace, he explained.

"It's far too easy to inadvertently share your IP with the world by hitting 'Send,'" said Foundyller.

"On the other hand," he said, "where companies have locked down everything, engineering productivity, collaboration and innovation is grinding to a halt. That's why engineers resist security measures that get in their way. There's no magic potion to fix this."

Foundyller said that applications that can address at least some of the security issues are starting to come out, but he noted that it will take "both a cultural shift and an attitude adjustment to make it work." ▸

IT'S A NOTEBOOK.
IT'S A TABLET.
IT'S THE BEST OF BOTH WORLDS.

Fujitsu recommends
Microsoft® Windows® XP Tablet PC Edition

LifeBook® T4000 Tablet PC

- *Configurable to only 4.3 lbs.*
- *A versatile, built-in modular bay*
- *Up to 8.5 hours maximum battery life*
- *XGA wide-view display with optional indoor/outdoor XGA wide-view and standard SXGA+ high-resolution displays*

It's a notebook *that converts* *into a tablet.*

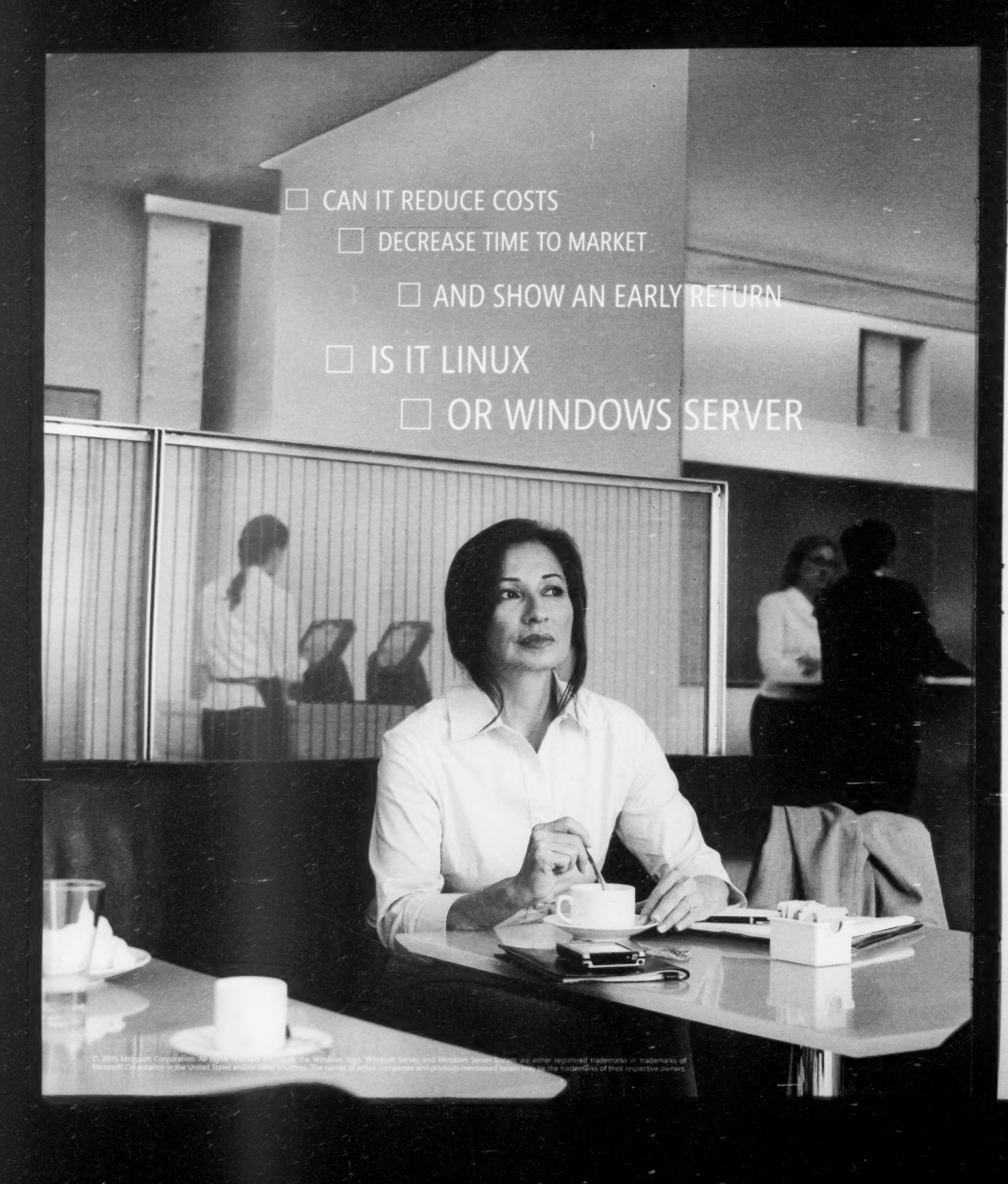
Why limit yourself to an ordinary tablet or notebook? The Fujitsu LifeBook T4000 Tablet PC with Intel® Centrino® Mobile Technology instantly changes from one to the other with just a twist and flip of its brilliant, 12.1" screen. From the field to the back office, this no-compromise solution is the only mobile computing platform you need. With its built-in modular bay, you have the flexibility to burn CDs and DVDs, work up to 8.5 hours between charges, or trim down to a nimble 4.3 lbs. It also features the exclusive Fujitsu BayLock™ utility, which keeps the media drive and its contents safe should you accidentally hit the release button while in Tablet PC mode. To find out why the LifeBook T4000 Tablet PC gives mobile professionals the best of both worlds, visit **www.shopfujitsu.com/LifeBookT4000** or call **1.800.FUJITSU**.

FUJITSU

THE POSSIBILITIES ARE INFINITE

intel inside
centrino
MOBILE TECHNOLOGY

©2006 Fujitsu Computer Systems Corporation. All rights reserved. Fujitsu, the Fujitsu logo and LifeBook are registered trademarks of Fujitsu Limited. BayLock is a trademark of Fujitsu Computer Systems Corporation. Centrino, Intel, Intel Inside, the Centrino logo, the Intel logo and the Intel Inside logo are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. Microsoft and Windows are registered trademarks of Microsoft Corporation.



© 2005 Microsoft Corporation. All rights reserved. Microsoft, the Windows logo, Windows Server, and Windows Server System are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. The names of actual companies and products mentioned herein may be the trademarks of their respective owners.

Microsoft

☑ GET THE FACTS.

SWITCHING FROM RED HAT LINUX TO WINDOWS SERVER WILL SAVE TOMMY HILFIGER AN ESTIMATED 25–30% IN IT COSTS.

"Our migration to Windows Server™ will reduce our IT costs by an estimated 25–30 percent, but that's only the start. Our efforts are improving our competitive advantage. We developed a full e-commerce site within six months, in time for the 2005 holidays, and we'll continue to benefit from compressed product design times and an optimized supply chain." –Eric Singleton, CIO TOMMY HILFIGER

For these and other third-party findings, go to microsoft.com/getthefacts

Microsoft® Windows Server System™

Breaches Push Companies to Improve Internal Safeguards

Security managers shifting their focus to preventing accidental data leaks

BY JAIKUMAR VIJAYAN
SAN JOSE

AFTER SPENDING years implementing controls designed to protect their network perimeters from external threats, companies are under growing pressure to do the same thing to guard against internal data lapses, according to attendees at RSA Conference 2006 here this month.

Driving the trend are concerns about accidental data leaks or thefts resulting from internal miscues at a time when companies are increasingly opening up their networks to business partners, suppliers and customers — and when a rash of recent data breaches caused by the mishandling of information has put several businesses in an unwanted spotlight.

Also playing a role are regulations that require companies to exercise greater control over the data they handle, conference attendees said.

"Even up to last year, there was a huge focus on strengthening the perimeter to make sure the hacker from outside didn't get in," said Stuart McIrvine, director of corporate security strategy at IBM. "Everyone was concerned about malware penetrating the perimeter."

More recently, though, "there's been a big shift in focus to what's going on inside the enterprise," McIrvine said.

More Data to Protect

Companies need to look at their internal processes and data flows to see what controls should be put in place to ensure that information is secure, said Gene Fredriksen, chief information security officer at Raymond James Financial Inc., a financial services firm in St. Petersburg, Fla., that manages almost $28 billion in assets.

"Traditional information security has been very good at protecting structured data," Fredriksen said. But now, he added, there's a whole class of unstructured data in spreadsheets, Web forms and other formats that is just as critical to business operations but has little of the formal rules that protect structured data.

As a result, "a lot of the compensating and reactive controls that I used to have are no longer effective," Fredriksen said. As part of its efforts to bolster internal controls, Raymond James is now considering a product from San Francisco-based Vontu Inc. that's designed to monitor confidential data and prevent it from leaving a network.

A New Way of Thinking

The need for better internal security is pushing many companies to look for new tools to help them monitor network traffic, databases and applications in real time, said Murray Mazer, vice president of corporate development at Lumigent Technologies Inc., a vendor of database monitoring products in Acton, Mass.

"Governance and disclosure requirements are forcing companies to think differently about their responsibility for data," Mazer said.

> **A lot of the compensating and reactive [security] controls that I used to have are no longer effective.**
>
> **GENE FREDRIKSEN,** CHIEF INFORMATION SECURITY OFFICER, RAYMOND JAMES FINANCIAL INC.

In the past, businesses could quietly fix a breach and not disclose it to anyone, he noted. "But that is simply not acceptable anymore," Mazer said. "People are being held more accountable for the data [they collect]."

There's also growing interest among IT and security managers in stronger tools for authentication and access management, content filtering, document management and digital rights management, according to security professionals at the conference.

IBM has been focusing on delivering products that allow companies to better control what employees "can and cannot do in an enterprise," McIrvine said. One example: The vendor has refined the role-based access management capabilities of the identity management products in its Tivoli software suite.

In addition, IBM recently developed software that works with the Tivoli tools to help companies spot, audit and report unusual behavior within an enterprise network, McIrvine said. ▸

MORE ON THIS TOPIC

Law enforcement officials investigate a potential security breach on a government server in New Hampshire. **Page 23**

New Threats Outflank IT Defenses, Says Vendor Exec

BY JAIKUMAR VIJAYAN
SAN JOSE

Thomas Noonan *is president and CEO of Internet Security Systems Inc., an Atlanta-based vendor of IT security products and managed services. ISS reported revenue of $330 million last year, and its customer base includes 17 of the largest banks worldwide. In an interview with* Computerworld *at RSA Conference 2006 here this month, Noonan spoke about what he described as the "continuously" changing security threats faced by corporate users.*

How has the landscape of IT security threats evolved over the past few years? The threat spectrum changes continuously. We've seen the threat spectrum changing from loud and disruptive to quiet and very, very insidious in many ways. Five years ago, you saw the advent of self-propagating worms, you saw lots of denial-of-service attacks. Today, you are seeing the threats becoming much more [targeted], which makes traditional, signature-based defenses completely outmoded. This is why we believe that security has to move to a control-systems approach operating horizontally across the distributed enterprise and [operate] much less like a stovepipe approach, with lots of independent products each looking for a specific type of threat.

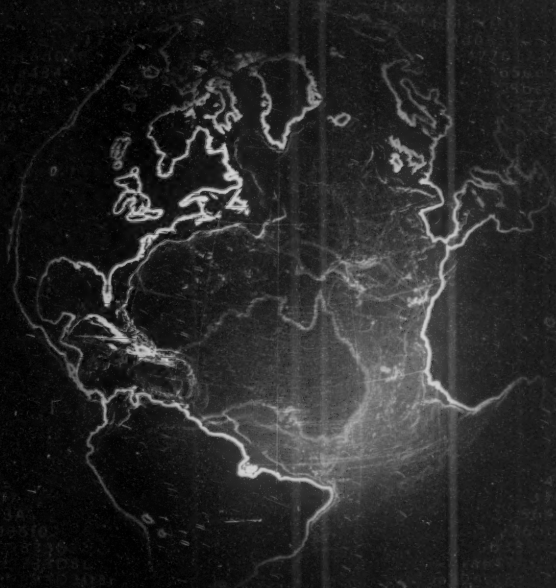
But is security being seen more as a business enabler or an impediment? It certainly shouldn't be seen as an impediment. But at the same time, it is an awfully expensive enabler the way it is being done today. This is why best-of-breed is necessary but in itself is not sufficient. I strongly believe that the infrastructure providers such as Microsoft and Cisco will not solve this problem by adding features to each of their infrastructures. In fact, they are using security as a competitive differential and a closed advantage against their competitors.

Why is IT security so expensive? Operationalizing it is making it expensive — the fact that the typical customer might be managing 15 to 20 different relationships, 15 to 20 different data structures, 15 to 20 different contract vehicles, support [service-level agreements], updating capabilities and so on.

Does focusing on compliance strengthen or dilute enterprise security strategies? That's an interesting question. I take a step back and say, Compliance with what? Compliance assumes you have a policy. Is the policy internal, or is it regulatory? I think *compliance* is being used as a buzzword, and I'm not sure it means anything anymore. It has been good for the industry because of the awareness. But what's good for the industry can also be confusing for the industry. I think that because the barriers are so low in the compliance world, it is a survival-of-the-fittest game if that's your only differentiation.

Despite all the talk about an increased focus on security, why are we continuing to see so many data breaches being reported these days? I think it is showing us that the fearless, trustworthy, self-defending networks are failing. The fact is, our industry is growing at 10% to 15% [per year] and is about $18 billion [in total revenue]. Financial losses due to cybercrime [are] growing at 10% to 15% and [are] about $50 billion. So the more we advance, the bigger the losses get. There is something wrong with that, and I believe strongly that it is because we have pigeonholed ourselves into an approach to the industry that, quite frankly, lacks innovation. ▸

CAN YOU DELIVER THE EASE OF SSL-VPN ACCESS NO MATTER WHERE USERS GO?

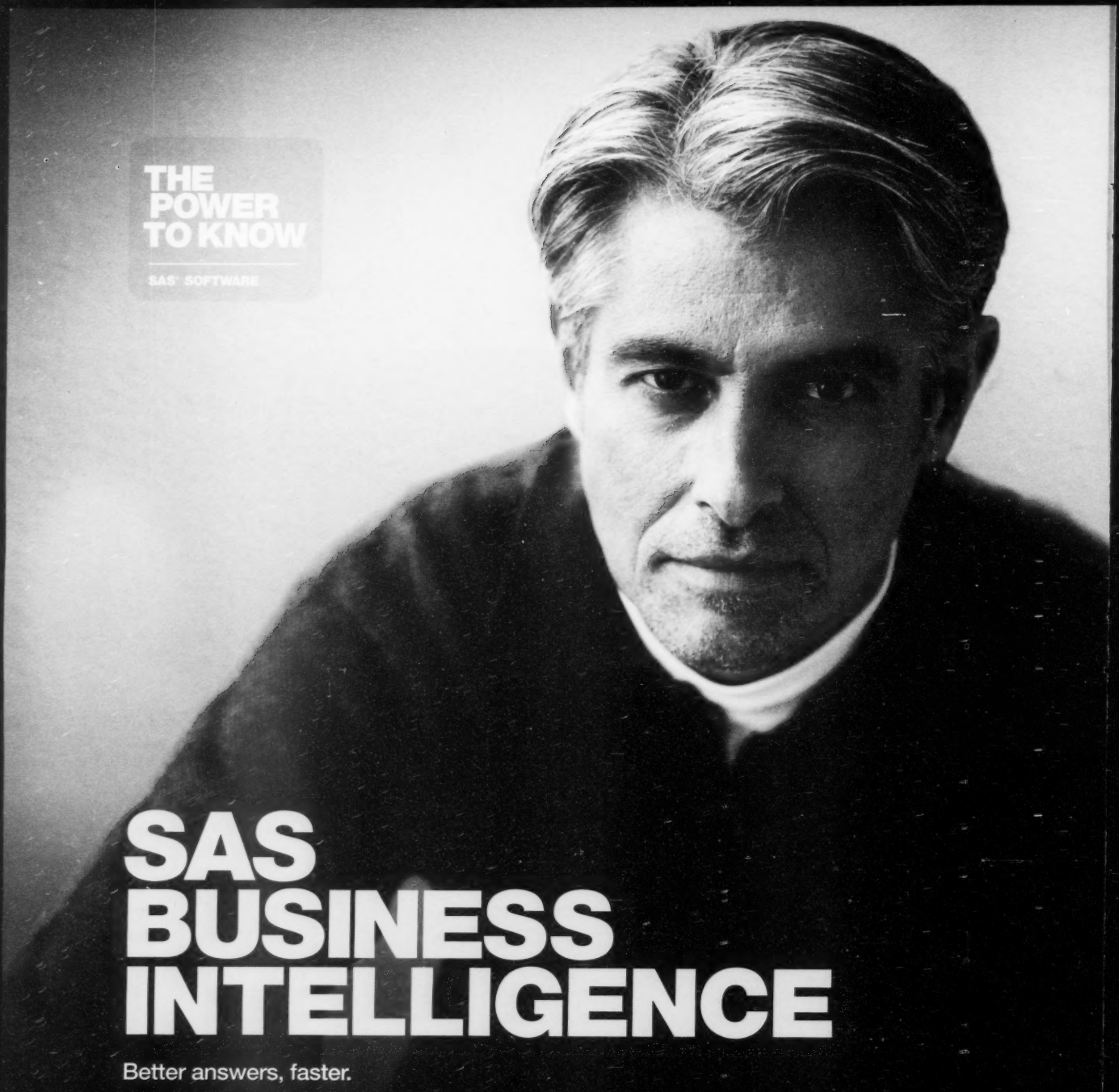


TAKE A DEEPER LOOK.

With SonicWALL SSL-VPN you get all the protection without the fat. It's a clientless, secure remote access solution that integrates alongside almost any existing firewall and requires no per-seat license. Your users can easily access your network from anywhere in the world using a standard Web browser. So there are no fat clients to preinstall and maintain. When deployed with a SonicWALL Network Security Appliance—featuring deep packet inspection and the Gateway Anti-Virus, Anti-Spyware and Intrusion Prevention service—no SSL-VPN solution is more secure. The HTTPS connection is decrypted, and viruses, Trojans, spyware, phishing attacks, and other emerging threats are eliminated. Find out why SonicWALL SSL-VPN makes life easier for you and your users. Go to **www.sonicwall.com/globe** or call **1.888.557.6642** today.

SONICWALL

PROTECTION AT THE SPEED OF BUSINESS


THE
POWER
TO KNOW
SAS® SOFTWARE
SAS
BUSINESS
INTELLIGENCE
Better answers, faster.

Challenged with balancing efforts to support the latest strategic initiatives while still lowering operational costs? SAS takes you beyond traditional BI query and reporting to a higher level of shared decision making that drives innovation. Our fully integrated Enterprise Intelligence Platform sets the foundation, linking technologies for data integration and storage, reporting and analysis. Proven software, industry-specific solutions and domain experience extend the value of your investment. Bridging the gap between what you have – growing expectations to deliver a return on investment – and what you want to achieve – increased profits, reduced risk and improved performance.

SAS® ENTERPRISE INTELLIGENCE PLATFORM

SETS THE FOUNDATION FOR DRIVING INNOVATION AND SUPERIOR PERFORMANCE.

SAS® SOFTWARE FOR DATA INTEGRATION

Regardless of the project list – building data warehouses, consolidating multiple databases, cleansing data in real time, augmenting operational data with new information, or even dealing with ERP systems – SAS helps you connect, cleanse, consolidate and create value from all your enterprise data. Whether your data integration needs are stand-alone, or you need to seamlessly integrate with our scalable, end-to-end business and analytic platform.

SAS® SOFTWARE FOR INTELLIGENCE STORAGE

SAS Intelligence Storage ensures that business and analytic intelligence can be obtained quickly, by serving the data through a platform designed for rapid retrieval and reporting without sacrificing manageability and operational integrity. And our integrated, scalable storage architecture grows easily with your organization, unlike many "one-size-fits-all" platforms.

SAS® SOFTWARE FOR BUSINESS INTELLIGENCE

Our integrated suite of BI software ensures fast, easy access to multiple data sources, consistent and credible reporting, and simple deployment of data across your organization. SAS eliminates the need to maintain data, security and metadata in several places and formats – providing reliable results that can be shared quickly to ensure that IT inspires business innovation.

SAS® SOFTWARE FOR ANALYTICS

SAS offers the industry's widest portfolio for data analysis, ranging from experimental design, predictive and descriptive modeling, time series analysis and forecasting to simulation and optimization. With SAS analytics, organizations can reduce uncertainty, predict with precision, improve quality and drive performance.

www.sas.com/betteranswers • free white paper

Want proof? Find out why SAS is at work in 96 of the top 100 companies on the FORTUNE Global 500® — with customer retention rates exceeding 98% annually for 30 years.

sas®

Factiva Consolidates File Sharing Across Its Network

News provider hopes system reduces branch-office need for technicians

BY LUCAS MEARIAN

FACTIVA, like a lot of midsize companies with dozens of branch offices, has faced a growing problem in recent years: Its remote tape backups have often failed, forcing administrators to travel to far-off sites to fix them.

To solve the problem, Factiva, a joint venture of news and information providers Dow Jones & Co. and Reuters Group PLC, early last year moved to replace its tape-based backups with wide-area file-sharing (WAFS) technology from Tacit Networks Inc. in Princeton, N.J.

The new system promises to let the IT staff in Factiva's main data center at its South Brunswick, N.J., headquarters manage data files in each of its 42 branch offices.

Ongoing Project

Factiva began rolling out Tacit's IShared caching hardware appliance last summer and expects the project to continue over several more years, said Dan Weiss, systems architecture and administration director at Factiva.

The WAFS technology, which uses a distributed file system to allow access to the same file from multiple locations, has so far been installed in four remote offices, he said. Each of the remote offices has between 20 and 25 workers.

"The goal — nirvana — is to have everything in one place and for it to be managed out of one site," Weiss said, adding that it's also important that all files be "backed up in one place using the enterprise infrastructure we already have in our main data center."

So far, the WAFS architecture is providing the four offices with access to files in Factiva's main data center over a WAN, Weiss said. Any changes to the files are recorded at the main data center, where backups and restores can be managed centrally, he said.

Each of the remote offices runs file-share and Active Directory servers, as well as domain service servers and print servers, Weiss said.

Karin Borchert, Factiva's chief operations officer, said the WAFS technology will also allow the company to support personnel working outside of its offices. The company was looking to improve its infrastructure to support workers in home offices and remote locations, Borchert said.

Factiva has traditionally used nontechnical, local personnel to load and change out tapes in direct-attached storage drives for data backup, and it continues to do so in branch offices where WAFS technology hasn't yet been implemented, Weiss said.

Technicians from Factiva's data center are sent to restart stalled tape backups, swap out broken tape drives and perform other "janitorial-like" functions in the regional offices, Weiss said. "It's not a particularly good use of our people and resources," he said.

Weiss described the WAFS technology as almost "black box" in nature and simple to set up. "It was a gradual rollout to one office at a time over four to five months, with one person deploying it," he said. "It was really quite seamless."

Factiva chose the IShared server over the other half-dozen or so vendors of the technology mainly because Tacit is close by, which helps with support, Weiss said.

"IT organizations are realizing that the traditional networking approach of simply throwing more bandwidth and networking hardware at the problem is not the solution," said Greg Schulz, founder and senior analyst at research firm StorageIO in Stillwater, Minn.

"Some vendors are focused just on improving low-level bandwidth, while others are focused on specific application acceleration and others do various combinations," Schulz said.

Schulz cautioned users that IT organizations need to ask vendors "waving the WAFS flag" just what services and IT issues their products address. He added that the technology is probably not a good fit for localized environments. ▸

> **"The goal – nirvana – is to have everything in one place and for it to be managed out of one site."**
>
> **DAN WEISS,** SYSTEMS ARCHITECTURE AND ADMINISTRATION DIRECTOR, FACTIVA

Sybase Exec Hopes Wireless Expertise Can Spur Growth

BY ERIC LAI

Marty Beard, *senior vice president for corporate development and marketing at Sybase Inc. in Dublin, Calif., is the chief evangelist for Sybase's 3-year-old "unwired enterprise" strategy, which aims to connect data stored in its host databases with mobile systems. In a recent interview with* Computerworld, *Beard talked about the state of Sybase and its plan to return to growth on the back of its mobile technologies.*

What is the state of Sybase's core database business? We launched ASE 15 last year. We can now encrypt all of the data inside ASE. Our competitors, like Oracle, encrypt data on the outside. But as it sits in an Oracle database? Not encrypted. Our [ASE] users are investment banks, huge trading houses, the NSA, the CIA, so we spend a lot of time on security. Security was one reason we announced 640 new ASE customers in 2005. Forty percent of those wins were in China, where we are No. 2. We're not competing with any legacy brand perceptions there. It's a flat-out bake-off, and Sybase is winning more than its share there. In the U.S. or Europe, where it's a battle to get somebody to swap out, it's much harder.

Can you compete on price with open-source databases? Open-source is just another business model: Get as many users [as possible] on your free offering and convert that into paid support. That business model has been co-opted by the larger vendors, including us. We have Sybase ASE Express Edition. We have had 45,000 downloads of Express, and a lot of that converted into business.

I had one big customer call and thank us for making Express free. He had a lot of MySQL in his company, and he wasn't comfortable with it. He said, "I don't want my people playing around with that thing, because it will never get into production."

Another misconception about open-source is that it's free innovation. We have 1,200 engineers. And we're a lot smaller than Oracle. The reality is that the proprietary vendors are more innovative than the open-source guys.

IBM recently liberalized the usage restrictions on its free version of DB2. Would you do the same with Express? I think we would. I can't right now identify what it would be. We'll adapt with the times on that, for sure.

What's your strategy for increasing your 5% share of the overall relational database market? Our mobility strategy has brought lots of customers who had never done business with us before. Being treated as a strategic vendor on mobile data management is giving us the opportunity to come in there and start talking about our value on the data management side.

With our ASE 15 launch, we have completely stabilized the 5% we do own. The issue is, Can we grow that 5%? We can grow it in geographies where they are not still worried about legacy brand perception. We'll continue to innovate and at least hold our own.

Who are your top competitors? When you talk about who can compete with Sybase on wireless and data expertise, IBM can. It can do the data management. On the mobile side, they are a little late, but they have some of the products. They have the services arm to bring it together. Oracle [has] not focused on mobility. Microsoft comes at it primarily from an OS or application perspective. They're there and they're loud, but usually it's with a partner. [Research In Motion] has strong brand recognition, which they hope to leverage beyond e-mail.

Do most CIOs yet view mobility as something more than giving BlackBerries to the sales force? There is some of that. But now we're seeing pretty broad-based extensions of all back-end apps. That's a real change over 2004 and late 2003, when it was primarily mobile e-mail. ▸

U.S. Army Laboratory Makes Major Linux Computing Cluster Move

Purchase will more than double the MSRC's computing capability

BY PATRICK THIBODEAU

A U.S. Army supercomputing center with a legacy that dates back to the Electronic Numerical Integrator and Computer (ENIAC) launched in 1946 is moving to Linux-based clusters that will more than double its computing capability.

The Army Research Laboratory Major Shared Resource Center (MSRC) in Aberdeen, Md., is buying four Linux Networx Inc. Advanced Technology Clusters, including a system with 4,488 processing cores, or 1,122 nodes, with each node made up of two dual-core Intel Xeon chips. A second system has 842 nodes.

In total, the purchase will increase the MSRC's computing capability from 36 trillion floating-point operations per second to more than 80 TFLOPS, Army officials said.

The decision to move into commodity clusters was not made quickly, said Charles J. Nietubicz, director of the MSRC. The lab held a symposium in 2003 to explore the issue and began running a small, 256-processor cluster system.

"We saw that cluster computing was this new kid on the block and was interesting," said Nietubicz. But the center wasn't about to start scrapping its other systems, made by Silicon Graphics Inc., Sun Microsystems Inc. and IBM, he said.

Cost Advantage

The MSRC isn't disclosing the purchase price, but Earl Joseph, an analyst at IDC in Framingham, Mass., said the average cost for a cluster works out to about $2,000 per processor, compared with $12,000 per processor for a RISC-based system.

Nietubicz said other vendors will need to improve their systems' performance or "reduce the price to provide equivalent performance."

Bluffdale, Utah-based Linux Networx builds systems using Advanced Micro Devices Inc. and Intel Corp. chips. The MSRC sale is the vendor's largest supercomputing order ever.

Nietubicz said he was convinced that clusters can work based on the MSRC's ability to get certain computational codes used in fluid dynamics, structural mechanics and other processes to scale to multiple processors mostly by using Message Passing Interface protocol-based code. MPI is used to create parallel applications.

Clusters accounted for about half of the total $9.1 billion in sales in the high-performance computing market last year, according to IDC.

A major consideration for moving to clusters is whether the high-performance software can scale to multiple processors. Systems that have been written in MPI can do so, but Joseph said companies that use off-the-shelf software usually find it difficult to make the switch because commercial applications don't use MPI. Government labs and universities, which own their own code, can usually invest the time to convert their code into MPI, he said.

Nietubicz doesn't see any major limitations to clusters, and while not all code can scale on clusters, he said the same problems occurred as the center moved from vector to shared memory. ▸

Depend on BLI's Color Printer Line Of The Year.

Buyer's Laboratory Inc. performed three months of rigorous testing of the leading color printers. Ricoh's color printer line proved to be the best of the best.

Let Ricoh dependability move your ideas forward.

ricoh-usa.com/itchannel

RICOH™

EMC²
where information lives®

Information lives at El Camino Hospital. A leading California medical facility, El Camino Hospital received the highest ranking in a recent patient survey. But they never rest in their mission to use information technology to help them improve patient care. So they turned to EMC to build a flexible information infrastructure that reduces costs and provides fast, reliable information to doctors and nurses. So everybody feels much better. Talk to EMC or your EMC® Velocity² Partner about EMC solutions that start simple and stay simple.

Read the El Camino Hospital profile at www.EMC.com/ElCamino or call 866-796-6369 to learn more.

EMC², EMC, and where information lives are registered trademarks of EMC Corporation. © Copyright 2005, 2006 EMC Corporation. All rights reserved.

N.H. Breach May Have Exposed Credit Card Data

State IT worker placed on leave after malware is found on system

BY TODD R. WEISS

The FBI, the U.S. Department of Justice and New Hampshire officials are investigating a potential security breach after a malicious application was found on a state server during a routine check earlier this month.

State officials said last week that there is no evidence yet that any credit card information was stored on the server.

The New Hampshire Division of Motor Vehicles and the state Veterans Home use the server to transmit financial information. The state's Liquor Commission uses it as a back-up for sales transactions.

The server held only credit card numbers; no other personal information was stored on it, officials said.

New Hampshire CIO Richard C. Bailey Jr. said that an unnamed state Office of Information Technology employee was placed on paid leave as part of the investigation. He declined to comment further on that action.

Impact Unclear

A spokeswoman for New Hampshire Gov. John Lynch said the ongoing investigation will look to determine whether the Cain & Abel application was ever activated on the server to look at the stored credit card numbers. "We don't know at this point [that] it actually happened," she said.

Bailey advised residents who have used the server for transactions to keep an eye on their credit card statements.

Bailey said it is still not clear how Cain & Abel — a password recovery program for Microsoft Corp. products — was placed on the server. The program can be used as malware by hackers to capture and crack passwords, according to several security vendors.

"It does have some quasi-legitimate purposes, I guess," Bailey said. But the program had been installed without authorization and was not wanted on the server, he added.

Such an action could have been done from inside the state's system or by accessing it through the Internet, Bailey said. A check of other servers on the state's computer network found no evidence of the malware, he said.

The program was found during a routine security check undertaken by state IT workers while they were evaluating a network intrusion monitoring system from Cisco Systems Inc. for potential purchase, according to Bailey.

The product they were evaluating, the Cisco Security Monitoring, Analysis and Response System appliance, can be used to search for system anomalies, track them down and stop any threats, he said.

The affected server was taken to FBI offices last week to undergo forensic analysis, which investigators hope will determine how the program got into the system.

Pete Lindstrom, an analyst at Spire Security LLC in Malvern, Pa., said the incident underscores the importance of constant network vigilance. "It just gets back to clichés like 'defense in depth' and actually taking the time to monitor your systems," he said.

Lindstrom said the Cisco technology likely helped find the malware, but he noted that it could have also been found through regularly scheduled scans and checks.

LESSONS LEARNED

Frank Hayes says the New Hampshire breach shows that security has to be part of the server consolidation process. See page 52.

When information comes together, business just keeps getting better.

EMC² where information lives

NOW STORAGE SIMPLICITY COMES IN AFFORDABLE, SCALABLE PACKAGES

EMC CLARiiON iSCSI SOLUTION

Buy for $20,640

36 mo $655 Lease*

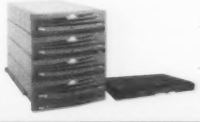
- EMC® CLARiiON® CX300i IP Storage Platform
- 365GB storage capacity (as priced), scalable up to 19TB
- EMC Navisphere® Workgroup license

EMC CLARiiON BACKUP SOLUTION

Buy for $22,253

36 mo $706 Lease*

- EMC® CLARiiON® CX300 Storage Platform
- 365GB storage capacity (as priced), scalable up to 19TB
- EMC Navisphere® Workgroup license
- EMC Dantz® Retrospect® Multiserver Backup software



EMC CLARiiON SAN SOLUTION

Buy for $24,525

36 mo $778 Lease*

- EMC® CLARiiON® CX300 Storage Platform
- 365GB storage capacity (as priced), scalable up to 19TB
- EMC Navisphere® Workgroup license
- 8-port switch

Whether you need fast backup and complete protection or scalable and easy-to-manage storage consolidation for your midsize enterprise, EMC brings you solutions that are high on results—and simple to use. That's because it's easier than ever to put award-winning software, robust storage, and world-class technical support to work solving your business's critical IT challenges.

BUSINESS SOLUTIONS FOR MIDSIZE ENTERPRISES CALL NOW 1-866-796-6369 or visit www.EMC.com/offers.

*Monthly lease amount is based on 36-month Fair Market Value lease, two payments in advance. This offer is valid until March 31, 2006 and is subject to credit approval and final lease documentation. This proposal is based on assumptions regarding the equipment configuration and sale and is subject to change if the configuration, software, services, treasury rates, or sale price changes. Pricing, specifications, availability, and terms of offer may change without notice.

EMC², EMC, CLARiiON, Dantz, Navisphere, Retrospect, and where information lives are registered trademarks of EMC Corporation. All other trademarks used herein are the property of their respective owners. © Copyright 2006 EMC Corporation. All rights reserved. Published in the USA. 2/06

DON TENNANT

The Censorship Call

THE ONGOING DEBATE over the censorship of online search results in China begs a question that not enough people are asking: Whose job is it to decide what search results should be censored?

Perhaps it should be the job of the International Spelling and Grammar Police. Maybe they should do something about the fact that when you Google the nonword "automonous," you get something on the order of 28,000 hits. Or the fact that when you Google the grammatically incorrect phrase "laying low," you get more hits (324,000) than you do when you Google the grammatically correct "lying low" (274,000). Maybe our children shouldn't be exposed to such ignorance.

DON TENNANT is editor in chief of *Computerworld*. Contact him at **don_tennant@computerworld.com**.

Most of us would probably agree that that would be a little over the top. Is the answer, then, to have no censorship at all? Should the censorship of photographic images be abolished so that Google can serve up any image the sickest mind can create? Most of us would argue that's not the answer, either.

It's probably not too much of a stretch to conclude that someone needs to make the censorship call, and that a society's governing body should be that authority. National governments aren't perfect, but in the world order that's likely to be around for a while, they're what we have to work with.

That brings us to China. You and I want every Chinese citizen to be able to read about the Tiananmen Square massacre, the Falun Gong and the Dalai Lama. The Chinese government disagrees. Who should make the call? U.S. Internet companies? The U.S. government?

We need to get it through our thick, self-righteous heads that it's not our call. Too many of us in the U.S. are taking the position that we should fight censorship, unless it's censorship that we happen to agree with. We need to realize that the hypocrisy of that perspective is lost on no one, including the Chinese people.

A story that we posted on our Web site last week, headlined "Google Denies Acting Unlawfully in China," cited a report in the *China Business Times* that was critical of Google for raising the censorship issue in the first place. The paper said Google is like "an uninvited guest" telling a dinner host "the dishes don't suit his taste, but he's willing to eat them as a show of respect to the host."

Yes, I'm very much aware that China's newspapers are government-controlled. But if you think that sentiment doesn't reflect the way the *laobaixing* (common people) approach these sorts of things, you don't know China. Don't think for a heartbeat that the generality of the Chinese people wants foreigners coming in and breaking Chinese laws or undermining positions taken by China's government. They may not be crazy about everything their government does, just as we're not crazy about everything ours does. But it's theirs, and they're every bit as proud and patriotic as we are.

As a journalist, I detest the restriction of information access. But part of me is almost glad that the Chinese people don't see a lot of what goes on in our own country. Hopefully they didn't see the obscene posturing of our elected officials earlier this month at a hearing of the House International Relations Committee, when they belittled representatives from Google, Yahoo, Microsoft and Cisco for abiding by Chinese law in China.

I also detest censorship of opinions. But keeping our arrogance out of the limelight, and avoiding that embarrassment, is an all too compelling argument for an exception. ▸

Don Tennant

VIRGINIA ROBBINS

Making Your Case to the Board

GOING BEFORE your company's board of directors for the first time can be a fear-provoking moment. More is at stake than the current matter under discussion; your performance can have repercussions for your entire career.

A highly skilled data architect recently asked me for tips on making such a presentation. He was honored by his board's request but concerned that he would make a misstep. Drawing on my experience from the many types of presentations I've done over the years, I outlined the following format for a successful status report:

1. Know your audience. You need to know what they expect from you and how long you have. You need to know how much they know about your topic and how they feel about it. Because board members often go on the attack when someone appears to be shirking responsibility, it's better to take too much responsibility for a failed or late project. They could end up defending you instead of laying into you.

VIRGINIA ROBBINS is a former CIO and is now chief operations officer at North Bay Bancorp in Napa, Calif. Contact her at **vrobbins@sbcglobal.net**.

2. Know your material. You are the expert; make sure your facts are correct. Speaking to your board is no time to shoot from the hip. You don't want to provide erroneous information that ends up in the board's minutes. Some boards like to see an exact expense number, and others like to hear about market share, but most want both.

3. Don't use jargon. Your purpose is to convey information. You aren't going to impress people by peppering them with technical acronyms. Avoid them, unless they're in such wide use that they're known to your parents and grandparents.

4. Know who's going to introduce you and what's going to be said. Be prepared with your own introduction should the person introducing you stumble.

5. Use the rule of three. Assuming that you have the standard three to five minutes for your presentation, summarize your message on one slide with three main bullets, each with three sub-bullets. Arrange your sub-bullets so you end on a positive note.

Under the first bullet, ensure that everyone in the room understands your project and its importance by briefly recapping what the project is, what value it brings to the company and how much it has cost. Whatever your boss has told the board is their truth. Make sure you present this information the same way your boss has. If your boss has misspoken, then gently clarify.

Under the second bullet, state clearly whether your project is on track. Take responsibility for good news and bad. Provide the top three reasons why you are where you are. Make these reasons specific and concise. If a lead engineer quit or your team is learning from its mistakes, say so.

Under the third bullet, describe what actions you are taking as a result of your project's status. If you are on time, explain what you've learned about keeping all projects on schedule. If you are behind, talk about what you and the team are doing about it.

6. Ask whether anyone has questions. And be prepared to answer them.

7. Finally, practice, practice, practice. Know how long it will take to give the presentation. Ask your boss to help you prepare for the board's questions.

And when called on to give your presentation, stand up straight and smile. At the end, the board members may not remember everything you said, but your attitude and professionalism will be recalled positively. ▸

BRUCE A. STEWART

Relationship Management Has Evolved

IT'S BEEN a decade since the first research notes on the role of relationship managers were published. In that time, most IT departments have instituted a relationship management function. Sadly, the life of a relationship manager remains a difficult one.

Relationship managers are often caught in a four-way struggle. Architects believe that the future rests in their hands — and often castigate relationship managers for being too ready to back the client against their designs. Project leaders in development believe that the client relationship is theirs — and often blame relationship managers both for coming to them too soon with early-stage ideas and for getting in the way when projects and maintenance requests simply need to be done. No one, of course, is happy to see the relationship manager when something has blown up and it's time to fix a problem.

BRUCE A. STEWART is a former CEO and onetime senior vice president and director of executive services at Meta Group Inc. He is now an executive adviser in Vancouver, British Columbia. He can be contacted at **bruce@bastewart.com.**

But the fourth side of this struggle — the client — remains equally problematic. Clients shift suddenly from pushing the relationship manager away (just jot down my order, then go and make it so) to embracing him avidly (when some hot piece of technology has caught their eye). It's a schizophrenic life that drives relationship managers to ask themselves, late on a Friday afternoon, "How did I ever get stuck here?"

Meanwhile, the practice of relationship management has evolved as well. Some of the tension being felt by relationship managers stems from the fact that everyone in IT has caught up to the changing role relationship managers fill. Often the infrastructure and service desk staff still see the relationship manager as simply the client's advocate; development and architecture often see relationship managers as intermediaries, report writers and "smoothers" after difficult meetings. Few have asked themselves, "What could these relationship managers do for us?"

Make no mistake, relationship managers have made significant headway in the past decade. Their role has evolved into a cross between the traditional consulting firm's "partner in charge of the account" and trusted adviser to the client. Sadly, their relationships with the rest of IT have not fared as well, and this tension is showing. CIOs have begun asking their relationship managers to step up the client relationship so that it can sustain application retirement and reinvestment decisions. They also want them to rearchitect portions of the business (not just systems) and inject metrics into the environment to confirm business case assumptions and tune investment strategies.

Relationship managers need to start managing internal relationships with the same attention they have paid to managing client relationships. They need to build internal credibility and will have to have some difficult discussions about roles and responsibilities. In most IT organizations, at least three different groups regularly call on the business clients — architecture, development and the relationship manager — a practice that can drive the business client insane, especially when three different messages are communicated.

Throughout the history of IT in enterprises, the goal has been to be invited to the table early in the business's thinking process, where ideas can be tested and real influence over the future felt. In many cases, the relationship manager has, with a decade's work, brought IT to that point. Smoothing out the lumps within IT — now — is the key to exploiting that credibility and the invitation to contribute.

In other words, managing relationships is everyone's job. ▸

WANT OUR OPINION?

More columnists and links to archives of previous columns are on our Web site:
www.computerworld.com/columns

READERS' LETTERS

The Satisfaction of Doing the Impossible

WHAT A nice story Don Tennant told about the search for his son's watch ["Refusing Futility," Jan. 9]. It made me smile and gave me renewed hope that my own "impossible" task will soon be successful. My new motto will be, "Just a foot away from success."

Betty Quay
Vice president, professional services, Houston

TENNANT'S ARTICLE sums up an experience I recently had. I got a call from a company on Nov. 11 saying they needed a system built by Thanksgiving. Some work had been done, but they were stuck in the design. As an experienced SQL Server database developer, I knew there was little chance of completing a system in few a weeks, but I decided I wanted to help. I found the 1+1=11 synergy we all love to be a part of and a team of four that worked more than 80 hours a week to put the thing together. At times, I was coding by blind faith and intuition.

The payoff from trying was satisfying and resulted in one of the best gigs I have had in 25 years. We all figured out we were much better at what we do than any of us even knew.

Gayle Coffman
Proprietor, World Class Computing, Brea, Calif., wccomp@nwlink.com

Let's Do Lunch

CIO POWER LUNCHES aren't a new concept, and Atlanta is not the only place where they happen ["Power Lunch," Jan. 9]. As an example, there has been a CIO roundtable in San Diego for the last four years that meets quarterly for lunch at a member site. Like the Atlanta group, there is no formal agenda, and members can discuss whatever is on their minds. The San Diego group stays in touch by e-mail in the off months. Even though I now work in Las Vegas, I've stayed part of the San Diego group – and I'm part of a bimonthly CIO power breakfast group here in Las Vegas.

Norbert J. Kubilus
CIO, Sunterra Corp., North Las Vegas, Nev.

Thanks for a Laugh

AS I READ "Mind Benders" in the Jan. 16 issue, I was laughing out loud. Humor is one thing that is lacking with nerds these days. I hate seeing them moping around with an "I don't get paid enough for this stuff" chip on their shoulders. I vowed some years ago that I wouldn't take anything in life more than 60% seriously whenever possible. I really appreciate Don Tennant's humor.

Andy Caldwell
IS director, George County Hospital, Lucedale, Miss., acaldwell@gch.ms

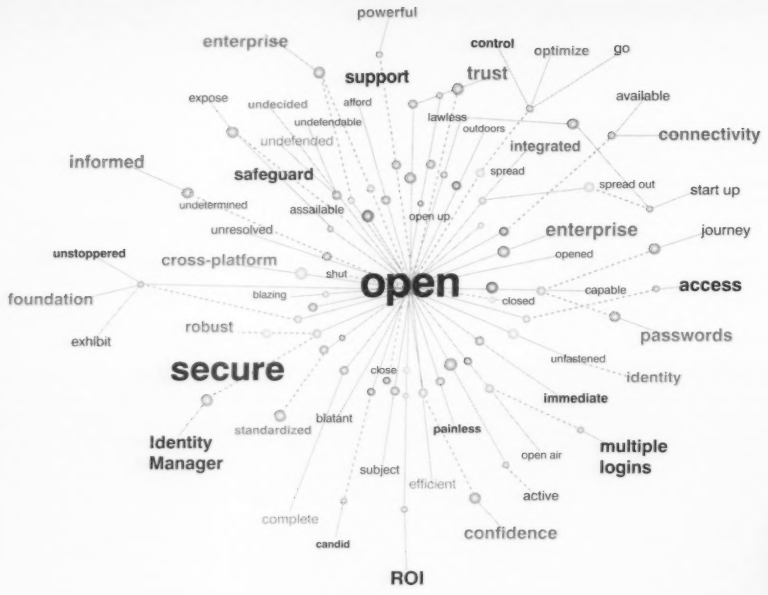
I Think I Get It

IN THE article "Ray Kurzweil: IT Will Be Everything" [Jan. 9], Kurzweil poses the question, "Are we intelligent enough to understand our own intelligence?" That reminds me of a quote from technology analyst Emerson Pugh: "If the human brain were so simple we could understand it, we would be so simple that we couldn't."

Don Boroughs
Greenville, S.C.

COMPUTERWORLD welcomes comments from its readers. Letters will be edited for brevity and clarity. They should be addressed to Jamie Eckle, letters editor, Computerworld, PO Box 9171, 1 Speen Street, Framingham, Mass. 01701. Fax: (508) 879-4843. E-mail: letters@computerworld.com. Include an address and phone number for immediate verification.

For more letters on these and other topics, go to
www.computerworld.com/letters



DEFINE **YOUR** OPEN ENTERPRISE™

In my Open Enterprise, confidence flows freely because information flows securely.

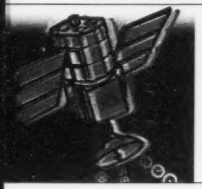
Every identity, transaction and document represents a possible security risk for your company. A risk that could cost you millions in litigation and overhead associated with data and intellectual capital theft—plus your reputation and brand equity. Security and Identity solutions from Novell®, the most proven in the industry, centralize identity management, reducing the complexity and costs of managing users and access, all while ensuring regulatory compliance for you. There's no better way to secure your enterprise. Or to ensure that your data is working for you and not against you.

Security and Identity solutions from Novell.
This is the way to secure your Open Enterprise.

Novell®

This is Your Open Enterprise.™
www.novell.com/secure

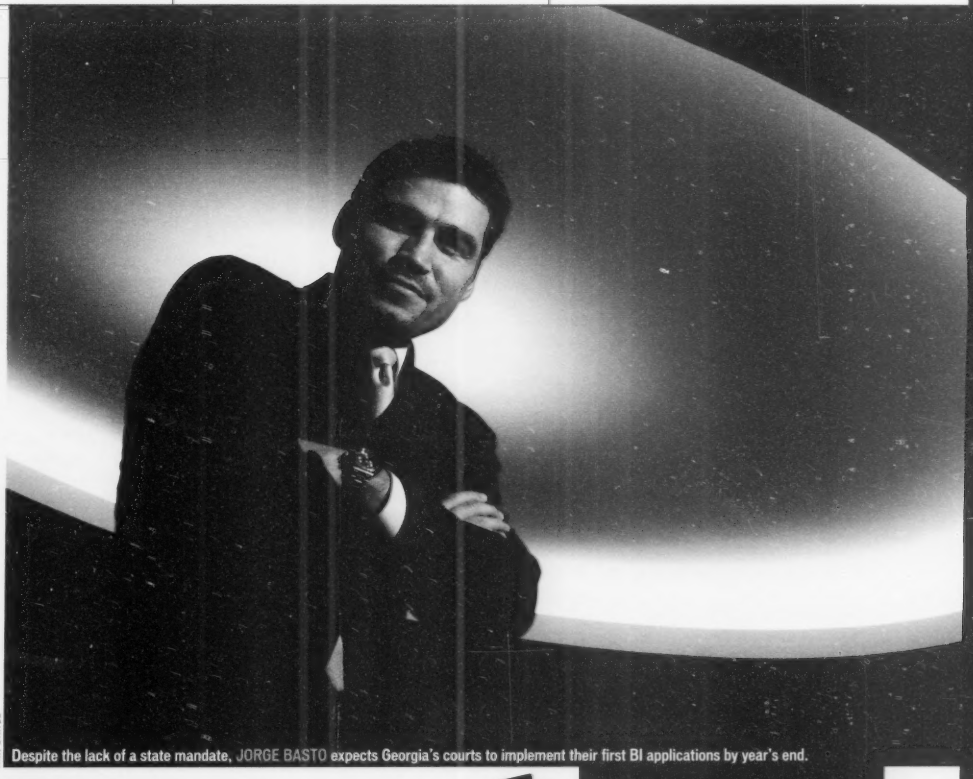
Copyright © 2006 Novell, Inc. All Rights Reserved. Novell and the Novell logo are registered trademarks; This is your open enterprise and Define your open enterprise are trademarks of Novell, Inc. in the United States and other countries. All third-party trademarks are the property of their respective owners.



GPS Repositions for Business
GPS technology is most commonly found in consumer goods like cars, cell phones and handheld navigation units, but it's starting to mature and is increasingly used in enterprise applications in both the public and private sectors. **PAGE 30**

QUICKTUDY
Semantic Web
This visionary project aims to enhance the Web by enabling computers to find, read, understand and use the content of Web documents to accomplish tasks via automated agents and Web-based services. **PAGE 32**

SECURITY MANAGER'S JOURNAL
Zero-Day Infection Is Headed Off Efficiently
Mathias Thurman's team must eradicate a virus, but his firm's antivirus vendor doesn't respond for several hours — and that's a long time in a zero-day attack. **PAGE 34**



ANN STATES

Despite the lack of a state mandate, JORGE BASTO expects Georgia's courts to implement their first BI applications by year's end.

Central Intelligence

Why many large organizations are moving to consolidated business intelligence suites.

NOT MANY CIOs would rush to take on a business intelligence project like Jorge Basto's. As director of technology at the Georgia Administrative Office of the Courts, Basto is working to implement a statewide BI system for the approximately 1,000 state courts, most of which have different databases, case management applications and reporting tools.

"There is no state mandate on software, data elements, etc. So it's very difficult to integrate case information," he says. "Our first step is trying to find commonalities, like find a specific, unique identifier for an offender."

Nevertheless, Basto expects to have the state's first integrated BI application in place by the end of this year. The application, which will be called Judicial Intelligence, will be implemented with the Business Objects XI suite. It will use XML for tagging and storing data used by the court's case management applications. XML will also be used for parsing document content. The Business Objects SA software will give Georgia's judiciary a single reporting, query and analysis tool layered over existing applications.

Basto says he believes the benefits of consolidating court reporting and analysis applications will be substantial: "There are seven levels of courts, numerous court-related agencies and offices, as well as several executive and legislative agencies that could use this information."

For example, with BI, court administrators could more easily spot problems. "They could pull statewide case-load statistics, for instance, and analyze them in order to make a case

for adding more judges," Basto says.

But trying to impose a single reporting, querying and analysis tool on any heterogeneous, geographically dispersed organization is likely to be difficult. So it's no big surprise that few enterprises currently have a single BI system. One of the downsides of moving from individual tools to consolidated BI is that not all users want to use a new application.

"In general, standardizing on a single BI platform is a good idea," says Kurt Schlegel, an analyst at Stamford, Conn.-based Gartner Inc. "However, few organizations have actually done it. Most are hampered by the political realities of replacing a tool from existing projects, all in the name of standardization."

According to surveys conducted by Forrester Research Inc. in Cambridge, Mass., most large organizations have between five and 15 different reporting and analysis tools. So consolidating means "taking away those technologies that users feel are most appropriate for their tasks," says Keith Gile, an analyst at Forrester.

Combining Functions

Consolidated BI products combine functionalities such as online analytical processing (OLAP), data mining, standardized reports, custom report generation, end-user querying, visual analysis tools, and executive dashboards and scorecard functions, which are used for tracking key performance metrics. BI may also include extract, transform and load tools for moving data into a data warehouse, and integration adapters for connecting directly to an application or database. Generally, though, BI offerings fall into one of two distinct categories: data mining/analysis or business reporting.

"They serve very different audiences," says Gile. "But if you bring the two together onto a single platform, then your reporting solution could potentially leverage some of the metadata or integration capabilities that are in the analytic tool."

Another reason for bringing in a BI system is long-term cost savings.

"With a single platform, you can take advantage of caching and clustering [and] blade technology," says Gile. "There really is an economy of scale to managing one BI environment."

Consolidation can also provide business users with access to more-sophisticated reporting and querying capabilities and give executives a better view of up-to-date operational data via user-friendly dashboards.

Come Together

Consolidated BI products usually include many of the following functionalities:

- OLAP
- Data mining
- Standardized reports
- Custom report generation
- End-user querying
- Visual analysis tools
- Executive dashboards and scorecards
- Extract, transform and load tools

"Organizations want a 360-degree view of their customers, employees and processes — and usually they have to pull that from multiple databases," says Eric Rogge, vice president and research director at Ventana Research Inc., a business performance management consulting firm in San Mateo, Calif.

Two years ago, executives at Mueller Inc., a Ballinger, Texas-based manufacturer of prefabricated steel buildings, wanted more flexible reporting options on key financial metrics, rather than just the standard monthly reports generated by the company's reporting system. They also wanted more consistency from the data coming out of three back-office systems.

In 2004, Mueller implemented Cognos Performance Applications for financial planning and analysis. The system extracted data from the company's J.D. Edwards back-end database via prebuilt Cognos Inc. integration software. Mueller's IT staff did some additional integration work in order to extract data from the two other custom applications used for reporting and analysis. The result was a unified reporting system that could identify trends and provide historical data as well as a balanced scorecard to compare Mueller's corporate results with its goals and industry best practices.

"Before, there was a lot of double-checking to make sure the info in one report matched the information in another. Now they're all in one place," says Mark Lack, Mueller's planning and financial analysis manager. "We're getting one version of the truth."

A planned migration to the new Cognos 8 suite will provide additional reporting on manufacturing processes as well, he says.

When employees or even customers need better information than they're getting from their existing tools, they may drive a move to BI rather than oppose it.

Employees at The Hillman Group Inc., a $380 million manufacturer and distributor of engraving hardware, were "starved for information" before the company introduced BI tools, says Jim Honerkamp, CIO at the Cincinnati-based company. "The company has grown dramatically, and that outstripped IT's ability to deliver information," he says.

Hillman Group purchased Information Builders Inc.'s WebFocus enterprise BI product and connected it to a J.D. Edwards back-end system and two custom applications. The company uses it to analyze financial data such as customer orders and costs and plans to use it for geographic analysis to optimize its distribution process.

"Now we can make better decisions" on critical issues like freight costs and sales, Honerkamp says. Even the company's president — a diehard spreadsheet user — became BI's biggest advocate after being convinced that the software was easy to use and produced accurate results, he says.

Customer Pressure

For Stuart Maue Mitchell & James Ltd., a legal auditing firm in Bridgeton, Mo., pressure from a few of its larger customers — major law firms — motivated the company to purchase Oracle Business Intelligence 10g and Oracle Portal in 2004 and build a data warehouse of customers' past billing data.

"It was really about client retention," says Bradley Maue, vice president of IT and systems development. "A few of our large customers knew what these kinds of tools could do and started asking us for them."

Now clients can access and analyze fees and other invoice-related data stored in an Oracle data warehouse. They can use the Oracle BI tools via the portal or import the data into their own Excel spreadsheets.

Stuart Maue's employees are also using the tools to provide better analysis and auditing for customers. "It's a big step up from the old days," says Maue. "In the pre-BI period, statistical analysis was minimal, and it would be in a spreadsheet. And the database could only produce reports based on codes."

At Florida's Broward County School District, the sixth-largest school district in the U.S., the goal is to provide teachers and administrators with "fingertip access to data that enables better decision-making," says Phyllis Chasser, the district's senior data warehouse analyst. And as of last year, that goal had been largely met, thanks to a Web-based BI portal that provides school employees and parents with access to information on school operations and student academics. Teachers, for instance, can drill down into an individual student's attendance records and grades, and parents can track their children's progress.

The idea for the system, which is based on Hyperion Solutions Corp.'s Business Intelligence Platform, was

Open-source BI

Just about any kind of application can be found in the open-source community these days, and BI is no exception.

Companies such as Pentaho Corp. and JasperSoft Corp., and the BizGres Project sponsored by Greenplum Inc., have open-source BI products. Also, The Eclipse Foundation has developed the Business Intelligence and Reporting Tools, or BIRT, system for Web applications.

However, analysts don't expect organizations to rush to open-source BI right away. That's partly because companies aren't rushing to BI in general. Those that are using open-source BI tend to be doing in-house application development, says Eric Rogge, research director at Ventana Research.

However, he does see open-source BI catching on eventually, as it has in many other application markets. "There will be more opportunities going forward for organizations to consider open-source as an alternative to commercial BI," Rogge says.

Bernard Golden, CEO of open-source consulting firm Navica Inc. in San Carlos, Calif., agrees. For one thing, he says, BI can be very expensive. "It can cost half a million to get your first byte of data," Golden says. "That is what is great about open-source. It provides greater flexibility and is much more cost-effective."

– SUE HILDRETH

first conceived in 1996, when administrators realized that the district had loads of valuable data on hundreds of AS/400s scattered around various locations but no quick way to run reports on it.

"You had to make a request and wait for someone to write a program or run a report," says Chasser. "A week later, you might have the information, but it was already half outdated."

With the help of an IBM Reinventing Education Grant, Broward County moved its data off of the AS/400s located at the schools and onto a centralized database on an IBM iSeries server, with a Hyperion Web-based portal for access to the information.

Broward chose Hyperion, says Chasser, for its ease of use, particularly for nontechnical and semitechnical users. While most people use a Web interface to find information, more sophisticated querying and analysis is done via the full client interface.

Making data readily available to employees was also the goal at Blue Cross and Blue Shield of Kansas City. The health insurer implemented Business Objects XI, which has an "Intelligent Question" feature that enables users to create queries by navigating a series of drop-down menu choices.

"It's a guided question," explains Erik Brokaw, enterprise system architect at Kansas City, Mo.-based Blue Cross. "So, for instance, if a vice president wants to know the top 10 employer groups by revenue for the last quarter of 2005, he can use the menu. As he makes selections, the question changes as well."

Web Services and BI

Once BI suites become more mainstream in large organizations, some companies could find themselves with competing BI products. That's especially likely in companies engaged in mergers. Therefore, open standards and Web services are seen as key to ensuring long-term BI compatibility.

Desmond Lownds, a software engineer in the architecture group at CHG Healthcare Services, a health care staffing firm in Salt Lake City, has steered clear of proprietary BI products for fear of not having enough support for open standards.

Instead, CHG uses JasperSoft Corp.'s open-source Java-based reporting tools and a custom Java Web application that displays indicators pulled from an AS/400 transactional system and a data warehouse. Lownds also expects to implement the open-source Pentaho Business Platform for additional reporting and OLAP functionality.

"Our infrastructure has to be adaptable," says Lownds. "We've had four mergers in the past few years and expect more."

BI vendors are acknowledging that concern and have moved to add support for Web services, says Forrester's Gile. He says BI companies that have started to move in that direction include Cognos, Hyperion, Information Builders and Actuate Corp.

Thus, BI suites may be open to mix and match purchasing from organizations looking to let different user groups have their best-of-breed tools.

"By exposing more functions with Web services, they're making it easier for their products to fit in with SAP and Oracle and IBM applications," Gile says. "So you can pull your BI pieces from wherever you want. That's a fundamental change from three or four years ago."

Ventana's Rogge agrees: "We will be seeing more out-of-the box data integration than before, and one way is through Web services." ◗

Hildreth is a freelance IT writer in Waltham, Mass. She can be reached at sue.hildreth@comcast.net.

BIG OIL PROFITS WITH BI

Valero Energy combines business intelligence and market prescience to turn itself into a profit leader in the oil industry. **See page 42.**

ricoh-usa.com/itchannel

Ricoh is BLI's color printer line of the year.
Ricoh dependability moves your ideas forward.

RICOH™

GPS REPOSITIONS FOR BUSINESS

Global positioning system technology is making a gradual transformation from consumer toy to critical tool for solving targeted business problems.

IT'S NOT uncommon to see politicians giving voters a snow job. But in this case, an elected official was done in by one. Several feet of snow buried the city of Chicago in January 1979, shutting down much of its transportation. Jane Byrne, then a little-known politician, successfully used the city's failure to clear the streets as a campaign issue, unseating a two-term mayor.

It's not surprising, then, that when the city began installing Global Positioning System equipment three years ago to track vehicles, snow plows were among the first to be equipped. With GPS, city officials can see where the plows are, what streets have been cleared and whether the plows are following assigned routes correctly.

Today, Chicago tracks 1,200 mobile assets, and another 4,000 are scheduled for next year. The technology facilitates improved service levels, heightened security, greater efficiency and faster responses to situations such as potholes and sewage problems.

"Not only can we look at real-time dispatch," says Molly Mangan, the city's deputy CIO, "but we can analyze where our vehicles are, how long they were idling there waiting for materials and how we might make our existing routes more efficient."

For Sears Holdings Corp. in Hoffman Estates, Ill., location is a key element in managing its 11,000 appliance service trucks nationwide, says Steve Jones, national routing manager for Sears' product repair service. Recently, the company implemented a system called the Sears Smart Toolbox, with applications co-developed by Sears and Redlands, Calif.-based Environmental Systems Research Institute Inc. (ESRI). Each truck is equipped with a ruggedized laptop from Itronix Corp. that uses GPS along with cellular, satellite and Wi-Fi connections. Technicians download daily work orders to their laptops, along with service documentation. The navigation system gives ver-

bal turn-by-turn directions from one work site to the next. It also reports the vehicle locations to the back-end ESRI ArcGIS system and the jointly developed Computer Aided Routing System so that workloads can be adjusted and technicians rerouted during the day.

The navigation system has cut driving times by 15% to 30% and has boosted the number of customers each technician visits from 8 to 8.5 per day, according Jones.

"Technicians don't have to look at maps, don't have to call the customers for directions and don't get lost," says Dave Lewis, ESRI's project manager for the Sears installation. "When you are talking about 11,000 technicians, even if you save them 10 minutes a day, it is a huge ROI."

New Applications

Once limited to military navigation, GPS hardware has blossomed into a $15 billion-a-year commercial business that will reach $22 billion in the next two years, according to ABI Research in Oyster Bay, N.Y. While much of that is tied up in consumer goods like cars, PDAs, cell phones and handheld navigation units, the technology is mature and is finding increasing use in business applications.

"GPS has a huge potential to create new business models and applications we don't have today," says Gartner Inc. analyst Thilo Koslowski, who is based in San Jose. "Once you capture GPS information and put some intelligence behind it, you will not only be able to assess the situation in real time but [also] make assumptions about the future."

One example he cites is the tracking of vehicle movements throughout the year as a method of determining fleet insurance rates. Traditionally, insurers charge flat rates based on the number of vehicles and miles driven. GPS makes it possible to add more precision to rates by analyzing factors such as total mileage per vehicle, ZIP codes where each vehicle is driven and parked, and vehicle speeds.

But in most cases, such applications are still on the horizon. From an enterprise standpoint, outside of tracking vehicle fleets, most commercial organizations don't need to continuously monitor the precise locations of large numbers of assets over a broad area.

Alternative technologies, such as RFID or Wi-Fi triangulation, can be used to track assets within a warehouse, store or hospital. But there are niche applications where GPS technology is proving indispensable, particularly in utility management, homeland security and agriculture.

ENRICO VARRASSO

Public-sector agencies are taking the lead in the use of GPS because they are generally responsible for a broader physical area — a town, county, state or nation — than are commercial enterprises.

In homeland security, GPS is used to track shipping containers as they enter or travel around the country and limit the areas where dangerous cargo can travel — a technique known as geofencing. For instance, the city of Chicago uses GPS on fuel tankers. When a tanker goes outside of its territory, the ignition is disabled. Similar systems are used in the nuclear industry.

GPS is also an integral part of bioterrorism protection, says Mark Smith, epidemiologist at the Guilford County Department of Public Health in North Carolina and head of the county's Public Health Regional Surveillance Team 5. With a grant from the Centers for Disease Control and Prevention, he oversaw development of a means of rapidly assessing health threats.

"The overall problem was to increase the speed with which we could collect the data and get it analyzed where there is a potential bioterrorism event," explains Smith.

The system consists of a wireless laptop base station and a series of wireless handhelds — either iPaqs from Hewlett-Packard Co. or Axims from Dell Inc. — with GPS cards from Globalsat Technology Corp. in Taipei. It routes people to the field locations where they need to conduct health surveys. Surveyors fill out customized forms, and address information is inserted automatically, based on the GPS coordinates. The handhelds wirelessly upload to the laptop for analysis using ESRI's ArcView 9.1 and the CDC's Epi Info epidemiological analytic software.

"We can do the analysis right there in the field if we need to," says Smith.

The main large-scale use of GPS, however, still lies in the area of fleet management and dispatch, and it can be used with other location-tracking technologies.

In the city of Chicago, vehicles are tracked, and signals are sent to headquarters every 30 seconds via a variety of wireless routes. The city's location-transmission system is designed to be vendor-neutral. Most of the vehicles use GPS transmitters, with the signals going to servers at location-tracking firm WebTech Wireless Inc. in Burnaby, British Columbia, before being forwarded to the city's own servers. Some older vehicles use radio frequency triangulation technology. In addition, mobile supervisors' cell phones are tracked using GPS or cellular tower triangulation.

> "When you are talking about 11,000 technicians, even if you save them 10 minutes a day, it is a huge ROI."
>
> DAVE LEWIS, SEARS PROJECT MANAGER, ESRI

The data from all three sources is then reformatted into the address format used by the city and loaded into an Oracle database. From there, the data is used by geographic information system applications provided by ESRI via a customized front end designed by GeoAnalytics Inc. in Madison, Wis. The location information gathered is used only by the dispatch staff, however.

"Our streets are on a grid system, and everybody knows the city like the back of their hand," says Chicago Deputy CIO Mangan. "Navigation would be fluff for us."

Locating the ROI

As organizations look at adding GPS, the key lies in identifying which applications will actually benefit from it. Many will not.

"There is a misconception that adding GPS to an application will automatically produce a huge benefit," warns Gartner's Koslowski. "If companies are not willing to change their processes, they may never achieve the potential they are looking for."

Sears has significantly improved its technicians' ability to service more clients. In other cases, such as Guilford County's bioterrorism task force, results are hard to quantify, but the organization is able to respond faster than it would without GPS technology.

Chicago lies somewhere in between. Right now, the city is incurring the expense of installing the equipment and setting up the vehicle monitoring, and it doesn't expect to see a financial return for a few more years.

"Eventually, you will get more efficiency, more accountability and more information at your fingertips," says Mangan. "For the first couple years, when you are buying all this equipment, it is an investment. But once you have the infrastructure set up and you are just paying the monthly fee for the data feed, that gets to be pretty cheap."

Robb is a freelance writer in Los Angeles.

AT A GLANCE

GPS TECHNOLOGIES

Several different technologies fall under the GPS umbrella. All can be used for determining location.

Navstar GPS: The original GPS system from the U.S. Department of Defense, it consists of a minimum of 24 satellites orbiting in four orbital planes at an elevation of 11,000 miles, along with ground-control stations. GPS receivers triangulate a location based on signals sent out by the satellites. The system is accurate to within 22 meters horizontally and 22.7 meters vertically.

Differential GPS: This system was developed by the U.S. Coast Guard to improve accuracy to the 1-meter range. It does this by supplementing the satellite signals with ground-based signals.

Differential Carrier GPS: Used in surveying, this method delivers accuracy to within millimeters. It uses a base station and a remote receiver, generally within 16 miles of each other, which both track the same signals at the same time.

Glonass: The Russian Space Forces system is similar to Navstar. Some devices receive signals from both the Navstar and Glonass satellites, providing greater reliability and accuracy than using a single system.

Galileo: This new 30-satellite European civilian system is expected to be fully operational by 2008, offering accuracy of up to 1 meter. The first satellite was launched on Dec. 28, 2005. In addition to transmitting positioning signals, satellites will also receive and retransmit distress signals for search-and-rescue operations.

– DREW ROBB

Semantic Web

DEFINITION

The Semantic Web is a visionary project that aims to enhance the usability and usefulness of the Web by enabling computers to find, read, understand and use the content of Web documents to accomplish tasks via automated agents and Web-based services.

BY RUSSELL KAY

QUICK STUDY

THE VAST AMOUNTS of computerized data contained on the World Wide Web (including the Deep Web; see QuickLink a8030) would appear to be the largest body of information ever assembled. Certainly, the Web is a uniquely valuable tool for both research and the dissemination of ideas and knowledge. But the fact remains that the Web has been remarkably resistant to direct, effective, efficient use by computers. Web pages are designed to be read by people, not machines; therefore, the meaning of the content must be inferred by people who look at Web pages, read HTML documents and view the labels of hyperlinks.

Tim Berners-Lee — the Oxford University graduate who invented the Web in 1989, wrote the first Web browser and server in 1990 and currently directs the World Wide Web Consortium — has a much grander vision for the Web of the future, which he calls the Semantic Web.

The Semantic Web adds a metadata infrastructure of tags to define elements of information within Web pages, linking them so computers can extract meaning from widely separated data as easily as the Internet currently links individual documents.

The Semantic Web will make it possible for machines, as well as people, to find, read, understand and use data over the Web to accomplish useful tasks. The Semantic Web will extend, not replace, the Web as we know it today.

In some instances, we already use specialized software to work with carefully identified Web data, but this is the exception, not the rule. It takes people to surf the Web, shop online, make sense of search-engine results and decide which additional links to follow.

The Semantic Web, once it becomes a functioning reality, will let a user launch an agent or process that will then proceed on its own, perhaps checking back with the user periodically as the work progresses.

The Internet was originally created as a way for researchers to easily exchange computer data with one another. People could transmit files using fundamental methods such as file transfer protocol. Although data traveled across the Internet in the form of bits and bytes, the basic unit of meaning, as far as the computer systems were concerned, was the file.

That changed when the Web came into being. Berners-Lee built his Web around pages, which are documents written in HTML. A versatile language, HTML combines interactive forms, text and multimedia objects — such as images and sound — and it describes how these elements should be presented and what the overall page should look like.

Unfortunately, HTML has a very limited ability to classify the blocks of text on a page, apart from the roles they play in a typical document's organization and in the chosen graphical layout.

As Web use grew, HTML's limitations led to the development of XML and XHTML, which began to offer mechanisms for adding meaning to Web pages. The Simple Object Access Protocol and Web services became a reality, making it easier for users and even automated processes to gather specific information or perform specialized functions across the Web.

When the Semantic Web comes to fruition, software will be able to locate information within Web pages, thus breaking through the document level and accessing real data that it can use directly. In one sense, the Semantic Web will become a kind of global database.

Making Machines Smarter

In an age when grandmothers and kindergartners use computers and surf the Web, it's sometimes hard to recall just how much direction or guidance a user has to give a computer to accomplish anything. Machines can't use partial information, they don't know what's inside an image or graphic, they're not much good at making analogies or combining information from different sources, and they don't have a big vocabulary.

We can easily use the Web to look up a *Computerworld* article or blog, locate a piece of music heard on the radio, buy a book, locate an eye doctor near our workplace or put out a question on a chat forum or bulletin board. But ask your computer to do the same thing, and it won't know where to start unless you give it a detailed, correctly spelled series of commands and responses in the proper sequence.

For example, using HTML and a Web browser, one can create and present a catalog page of items for sale. But HTML has no inherent capability to know that, say, Item No. JG1896 is an Acme widget with a retail price of $9.95. All HTML can specify is that the text "JG1896" should be positioned near the text "Acme widget" and "$9.95."

HTML has no way to express or know that "Acme widget" is a kind of consumer product, that "$9.95" is a price, or that these pieces of information describe an item that is distinct from other items listed on the same page.

The Semantic Web will address that by enabling computers and software to find, read, understand and use information contained inside Web documents to accomplish useful tasks via automated agents and Web-based services.

Kay is a Computerworld *contributing writer in Worcester, Mass. You can contact him at russkay@charter.net.*

WEB WHAT?

You may have seen the terms Web 2.0 and Web 3.0 in the popular press. In most cases, these are merely the trendiest buzzwords attempting to replace Semantic Web, a term that has been around for a decade and that some people evidently consider stale.

Components of the Semantic Web

THE SEMANTIC WEB IS BASED ON SEVERAL STANDARDS AND TOOLS:

- XML provides a basic format for structured documents, though it has no particular semantics.
- XML Schema is a language that provides data typing and allows document structure to be constrained to allow predictable computation.
- Resource Description Framework (RDF) is a simple three-part data model (subject, predicate, object) for referring to objects or resources and how they relate to one another. An RDF-based model is frequently represented using XML.
- Uniform (or universal) resource identifiers (URI) are short character strings that identify resources on the Web: documents, images, downloadable files, services, electronic mailboxes and the like. URIs (also called uniform resource locators, or URLs) give programs access to address resources in a simple way and in one click can log onto servers and issue obscure commands.
- RDF Schema (RDF-S) describes the properties, classes and hierarchies of RDF resources.
- Web Ontology Language (OWL) is used to explicitly represent the meaning of terms in vocabularies and the relationships between those terms. This representation of terms and their interrelationships is called an ontology. OWL has more facilities for expressing meaning than XML, RDF and RDF-S, and it goes beyond those languages in its ability to represent machine-interpretable content.

– RUSSELL KAY

ONLINE RESOURCES

For a list of Web resources about the Semantic Web, see **www.computerworld.com/thisweek**.

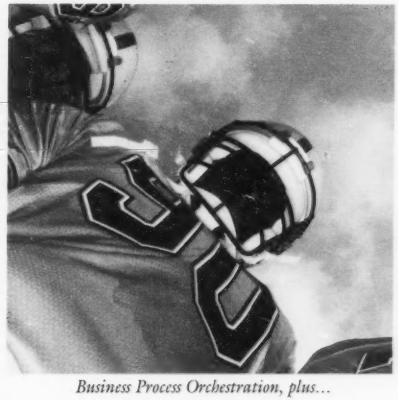
Are there technologies or issues you'd like to learn about in QuickStudy? Send your ideas to quickstudy@computerworld.com

To find a complete archive of our QuickStudies, go online to: **computerworld.com/quickstudies**

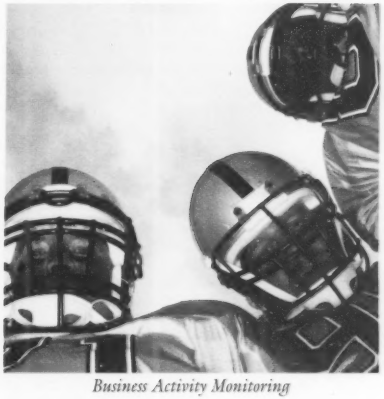
Innovations by InterSystems

Messaging, plus...

Composite Application Development, plus...



Business Process Orchestration, plus...



Business Activity Monitoring

Integrate Your Enterprise. Tackle Any Type of Integration With Ensemble.

Ensemble is the first product that enables fast integration and rapid development. This unique platform combines the capabilities of an integration server, data server, application server, and portal development software.

What makes this possible is an innovation by InterSystems: We developed Ensemble as a *single* technology stack, not a stitched-together suite of separate components. With a unified environment for integration, development, and management, Ensemble dramatically reduces time-to-solution.

We back these claims with this money-back guarantee: *For up to one year after you purchase Ensemble, if you are unhappy for any reason, we'll refund 100% of your license fee.** We are InterSystems, a global software company with a track record of innovation for more than 25 years.

InterSystems
ENSEMBLE

Request a FREE proof-of-concept project at **www.InterSystems.com/Ensemble16A**

* Read about our money-back guarantee at the web page shown above.

© 2006 InterSystems Corporation. All rights reserved. InterSystems Ensemble is a registered trademark of InterSystems Corporation. 02 06 EnsInno16CoWo

Zero-Day Infection Is Headed Off Efficiently

Our manager's team focuses on eradicating a virus, but what's taking the antivirus vendor so long? By Mathias Thurman

EVERY MORNING at 8:30, our IT department has an operational status meeting. All the managers have a chance to review changes to the infrastructure and can raise their own concerns. For example, the data center operations manager discusses any major change controls scheduled for the day and reviews the Priority 0 and 1 issues from the past 24 hours.

We also track help desk calls and virus tickets. Normally, about five to 10 virus tickets are open on any given day. That's not bad, considering that we have over 6,000 employees worldwide. Yesterday, though, the operations meeting was cut short by an explosion of virus-related help desk tickets. Within 30 minutes, the help desk received 40 virus-related calls, and the number was increasing rapidly. It seemed that a zero-day virus had made its way into the network.

It isn't difficult to become infected with one. Employees who use Web-based mail, such as Yahoo or Gmail, can inadvertently download malicious code to their workstations because that mail isn't scanned the way employees' Exchange mail is. Infections can also take root after employees connect their laptops to a broadband connection at home and then come back to the network with viruses in tow.

As security manager, it was important that I take charge and direct, monitor and manage this outbreak. First, we had to get the infected machines off the network. One of the symptoms in this case was that the workstation would send mail with an infected attachment to a list of e-mail addresses from its contact list. This meant I could have the help desk review e-mail headers and spot infected workstations. When one was found, someone from the help desk would call the user and have him disconnect the workstation from the network.

SECURITY MANAGER'S JOURNAL

When the user wasn't available, the help desk passed the MAC address of the system to the network operations group, which would disable the switch port. Finding the MAC address is fairly easy in our environment. The machine name of nearly all our desktops is the first letter of the employee's first name, followed by the first six characters of his last name. So, starting with an e-mail address of mthurman, for example, the help desk simply issues the nbtstat "-a mthurma" to determine the MAC address of the corresponding system. Then the network team can trace the MAC address to the appropriate switch port and disable the port.

Meanwhile, we isolated a sample of the virus and sent it to our antivirus provider, Trend Micro Inc., for analysis. After three hours, Trend Micro sent us a pattern file for detecting the virus, and much later it gave us a working TSC file, which actually cleans infected systems. This is the first occasion we've had to test the vendor's responsiveness in a zero-day attack scenario, but if this is typical of the time it will take, I'll be looking for another antivirus vendor.

Within 30 minutes, the help desk received 40 virus-related calls.

Other Tools

While we were waiting, I identified all the tools we had available that could help determine the extent of the infection and elements of its activity. These tools would also help us know when we could consider ourselves "clean" again and so resume normal activities.

Interestingly, our antivirus scanning gateway (from Proofpoint Inc. in Cupertino, Calif.), which monitors all incoming and most outgoing e-mail, was detecting the infected mail, and we were able to use it to help identify additional infected workstations. Unfortunately, anyone who points a mail client at our internal SMTP relays or external mail relays can bypass the Proofpoint servers, so infected mail was able to get outside the company, and we heard from other companies that were infected because of us.

Our firewalls are another useful tool. Since this virus spreads via e-mail, we combed through our firewall logs for excessive Port 25 connections and then assumed that workstations pinpointed this way were infected.

Nearly 12 hours after our daily operations meeting had been abruptly adjourned, we finally were able to push Trend Micro's updated pattern file and, more important, the TSC file to approximately 70% of our systems. (The other 30% were systems that hadn't come on the network, most likely because they were in distant time zones.)

To validate that everything was working fine, we used several tools, starting with the firewall logs. We saw a significant drop in Port 25 traffic, which was the main vector this particular worm used to make new infections. The Proofpoint logs also showed that things were improving; the number of infected e-mails had fallen from 2,700 to 28. New help desk tickets had dropped from over 100 to 11. We even brought an infected desktop into the lab and validated that it was clean by checking that certain files had been removed from the temp directory and by installing Ethereal (a free packet sniffer) to ensure that the workstation wasn't generating Port 25 traffic.

When it was all over, I considered us lucky, since only a small percentage of our desktops were hit by this malicious code. One change that this zero-day incident brought about is that I edited the security policy to restrict employees' use of external mail relays. Unfortunately, these restrictions can't be absolute; a couple of executives in the company want to be able to use SMTP mail relays. I put some best-practice guidelines together for them. My hands may be tied, but I want to at least provide some compensating controls.

Overall, I feel that the incident response process worked well. There's always some tuning required, though, and that will be addressed during the postmortem.

WHAT DO YOU THINK?

This week's journal is written by a real security manager, "Mathias Thurman," whose name and employer have been disguised for obvious reasons. Contact him at mathias_thurman@yahoo.com, or join the discussions in our security blogs: **computerworld.com/blogs/security**

To find a complete archive of our Security Manager's Journals, go online to **computerworld.com/secjournal**

SECURITY LOG

Security Bookshelf

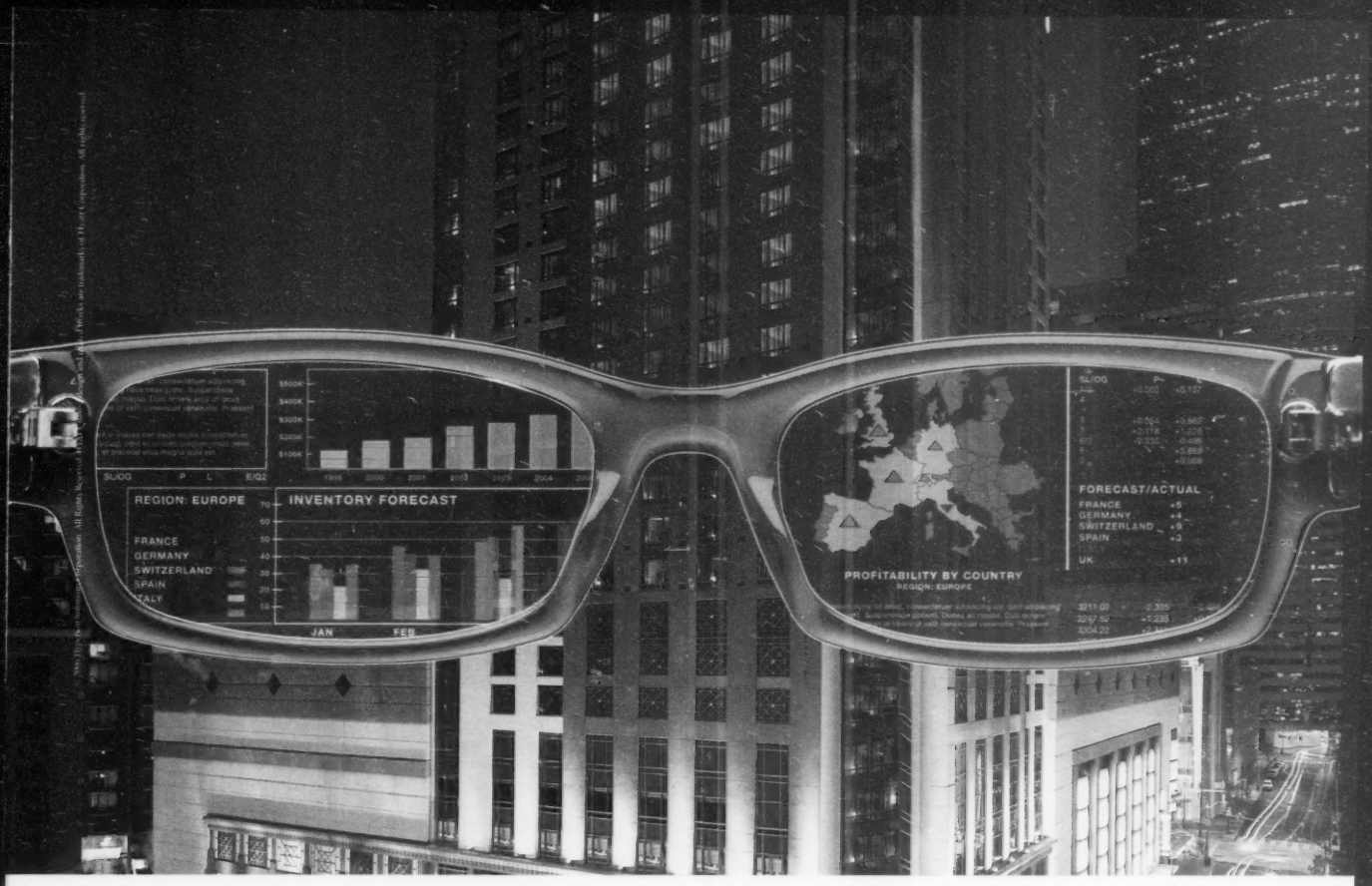
Real Digital Forensics: Computer Security and Incident Response, by Keith J. Jones, Richard Bejtlich and Curtis W. Rose (Addison-Wesley Professional, 2005).

I used to do a significant amount of forensics work, and I always yearned for a book as comprehensive as this one on the subject. The authors cover all the most pertinent topics, from open-source tools, such as the Coroners Toolkit, to one of my favorite commercial products, EnCase. The book is packed with tricks, tips and sample Perl scripts to address common problems, and an accompanying DVD lets the reader practice on real data.

– Mathias Thurman

Cisco Fixes Vulnerability

Cisco Systems Inc. has disclosed that a vulnerability in Versions 5.0(1) and 5.0(3) of the software used in Cisco Anomaly Detection and Mitigation appliances and service modules may allow unauthorized users to get access to the devices and/or escalate their privileges if Terminal Access Controller Access Control System Plus is incorrectly configured. TACACS+ authentication is disabled by default, and a device correctly configured for TACACS+ authentication is not affected by this vulnerability. Cisco has made free software available to address the vulnerability, and work-arounds are available to mitigate the effects of the flaw. An advisory is available at QuickLink a8040.



WHO ARE THE KEY DECISION MAKERS AT GLOBAL HYATT?

[Their 80,000 employees]

INTRODUCING HYPERION® SYSTEM™ 9

Global Hyatt's vision—make each of their worldwide employees critical decision makers, armed with the tools and up-to-date business information they need to make fast, forward-looking decisions. To make this a reality, Global Hyatt selected Hyperion System 9. The simplicity and elegance of Hyperion System 9 provides users the accurate information they need from any source, at any time and is making Hyperion System 9 an everyday business tool at Global Hyatt. Gain the visibility to transform your business. Go to **www.hyperion.com/hyatt**

Hyperion®

VISIBILITY.
PERFORMANCE.
SUCCESS.™

BRIEFS

Borland Launches Governance Suite

■ Borland Software Corp. has introduced Borland IT Management and Governance, software designed to provide IT-business alignment, increased visibility and control over IT projects, and increased resource utilization, according to the company. The software will handle subprocesses such as portfolio management, resource management, (including time tracking and skills/capacity management), financial management (including chargebacks and project accounting), asset management (including life-cycle and change management) and project and program management. The package includes an updated version of Borland Tempo, a Web-based IT management and governance tool set. Pricing for Borland IT Management and Governance starts at $75,000. Pricing for Borland Tempo is based on a named-user pricing model.

Grid Vendor Offers WebLogic Support

■ DataSynapse Inc., a New York-based grid computing vendor, said last week that BEA Systems Inc.'s WebLogic Server can now be embedded in its FabricServer software, which enables transactions to run in a grid environment. FabricServer supports the Java and .Net environments and allows an application to use resources ranging from desktops to large systems for transaction processing.

Certeon Debuts WAN Appliances

■ Certeon Inc. in Burlington, Mass., has introduced its Secure Application Networking WAN acceleration appliances. The S-Series appliances preserve security from the remote user's desktop to the server in the data center and back while accelerating all HTTP and HTTPS traffic, Ceteon said. They are available now in three models, the S-1000, S-2000 and S-3000, starting at $6,000 each.

MARK WILLOUGHBY

Graphics Pioneer Goes Back to the Future

IT'S BACK TO THE FUTURE for computer graphics pioneer Evans & Sutherland, as the company divests its simulation business and returns to its origins in advanced algorithms and display technologies. In refocusing on its roots, E&S provides a model for other boutique technology companies that helped launch a marketplace only to see it mature into something unprofitable.

MARK WILLOUGHBY, CISSP, is a 20-year IT industry veteran and journalist. He can be reached at **markw@messagingpgroup.com.**

E&S was founded by a couple of professors and computer graphics pioneers, David Evans and Ivan Sutherland, in Salt Lake City back in 1968, before Microsoft, Intel, Oracle and Cisco existed. Their graphics skills produced 79 patents and many of the graphics technologies routinely seen in today's video games and design systems — solids modeling, lighting models, hidden surface removal, reflectance, rendering and display.

Every time you see a teapot used to demonstrate some advanced graphics capability or performance, you can thank E&S. The company established the teapot as the de facto solid model for graphics benchmarks when demonstrating lighting models and reflectance in the early 1970s.

Many of today's household names in graphics — Pixar, Adobe and Silicon Graphics — were E&S spin-offs, including Singletrac Entertainment, which achieved cult status among gamers. Some dominant but less-well-known niche players, such as Tripos in molecular modeling and 3-D design pioneer CDRS, were also E&S spin-offs. The Disney movie *Tron* was rendered on E&S systems.

E&S launched one of the original technology initial public offerings in 1978 and quickly established leadership and gained a devoted following in high-end computer graphics. The graphics skills led E&S into the marketplace for military and commercial simulators, but the simulation business proved unfriendly for a company of graphics purists.

E&S has hemorrhaged cash despite the fact that 80% of the world's airline pilots maintain their skills on E&S flight simulators and that most military aircraft and helicopter pilots, as well as armored vehicle drivers, earn their wings on the company's gear. E&S lost $8.9 million in 2004 on $69 million in sales, and a whopping $36 million in 2003 against $84 million in revenue.

"Market forces beyond our control made it difficult for us to produce consistent results," said E&S CEO Jim Oyler. "The nature of the commercial simulation business had shifted to where a few large companies called the shots. It was too risky an environment for a small public company."

Oyler said the military market is consolidating to a few very large contractors. For example, avionics manufacturer Rockwell Collins is acquiring E&S's simulation business for $71.5 million. Rockwell Collins posted sales of $3.5 billion and net income of $396 million in 2005.

"We're not exiting the graphics business," Oyler said. "A lot of the patents and things that people remember E&S for are not being sold. E&S didn't start as a simulation company. We started as a company to create high-quality computer graphics. We're still very much doing that."

Despite the overlap between commercial simulations and computer games, Oyler said the future for E&S is not in creating more artificial worlds. "Game developers do overlap with high-end graphics performance for bragging rights, but not all of those technologies apply to simulation," he said. "The goal of a simulation is to make it as close as possible to the real world, not an artificial world like what's in a game. A lot of game development creates play dynamics in an artificial world."

Both domains — games and simulations — demand ultrafast shading, fill rates and rendering, but the commercial simulation world, especially military applications, has unique requirements. Oyler said games typically have no need for real-world inputs such as terrain mapping, a vital feature for missions involving terrain-following radar navigation. Games don't need to simulate real-world distortions, such as the impact of explosions or weather extremes on high-performance infrared or radar sensors acquiring targets, and they typically do not simulate degraded capabilities like battle damage, he said.

The future for E&S lies in ultra-high-resolution projectors for digital theaters and planetariums. "We'll be going back to our roots and working on systems that require very high resolution," Oyler said. E&S has filed for 20 patents on laser projectors capable of 32 million-pixel resolution on very large displays and curved surfaces, he said. The next step for E&S could be in bringing *Star Wars* or *Harry Potter* to an entertainment dome in your neighborhood, a move that will take the company back to its future.

WANT OUR OPINION?

For more columns and links to our archives go to: **www.computerworld.com/columns**

COMING NEXT MONTH ... THE NEW COMPUTERWORLD.COM

The No. 1 Enterprise IT Web site just got

Faster

Richer

Deeper

... and a little more colorful.

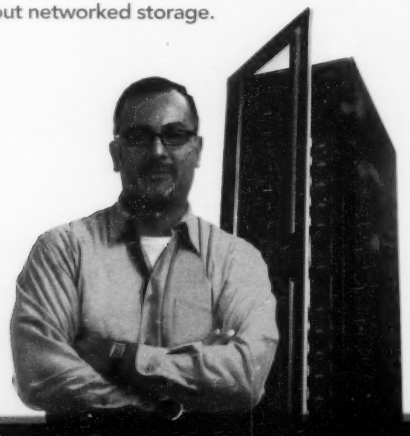
COMPUTERWORLD

Why maintain separate SAN and NAS systems when you can **consolidate both.**

One system, multiple choices. The Pillar Axiom™ enterprise storage system enables SAN, NAS, or both in a single storage environment — all managed through one powerful user interface. The Pillar Axiom lets you add performance and capacity up to 300 TB per system, without multiple software license fees. And because it's priced lower than what many companies pay just to maintain their storage systems, Pillar is the alternative you've been looking for.

To learn how Pillar is giving customers a better choice for networked storage, schedule a no-obligation half-hour briefing. Call **1-877-252-3706** or visit **www.pillardata.com/both**

Learn the truth about networked storage.



pillar™
DATA SYSTEMS

© 2006 Pillar Data Systems Inc. All rights reserved. Pillar Data Systems, Pillar Axiom, and the Pillar logo are all trademarks of Pillar Data Systems.

MANAGEMENT

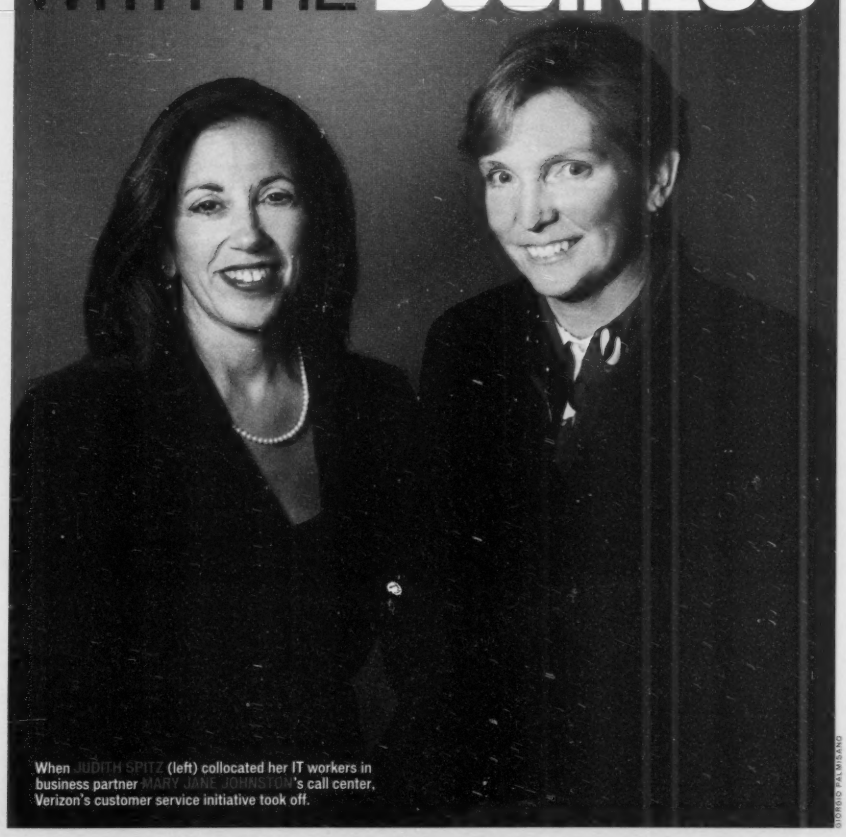
02.27.06

Drilling Down
Valero Energy has combined business intelligence and market prescience to become a profit leader in the oil industry. Here's how IT supports it all. **PAGE 42**

Managers' Forum
Paul Glen has advice for project managers tired of taking the heat for lagging colleagues and unreasonable project schedules. Also, he discusses how much a manager really needs to know about the work his people do. **PAGE 44**

OPINION
Confessions of a Full-Time Telecommuter
With more than a decade of telecommuting experience to draw on, Barbara Gomolski has some suggestions for those who would run a virtual office. **PAGE 46**

IT MOVES IN — WITH THE BUSINESS



When JUDITH SPITZ (left) collocated her IT workers in business partner MARY JANE JOHNSTON's call center, Verizon's customer service initiative took off.

PHOTO BY DAVID PALMISANO

Collocating IT staffers with their business customers can be a win for your company.

BY MARY K. PRATT

JUDITH SPITZ's tech department had to make work run smoother and faster as Verizon Communications Inc. moved forward with its customer service initiative.

Verizon wanted customers who called in orders or service requests to get great service quickly without talking to a rep, and IT had a major role in getting the job done. "Just delivering the system was not going to cross the finish line for us," Spitz says. "The way we operate had to be different."

So Spitz, senior vice president of network systems at the New York-based company, put her IT workers right in the call centers, engineering centers and dispatch centers. That way, they could see firsthand how to improve business processes.

"It probably saved our lives," says Mary Jane Johnston, who was then vice president for the fiber solutions center. "Their availability to us — their willingness to understand our world — was tremendously helpful." (Johnston has since been promoted to market area president for the Potomac region.)

While many companies are struggling to get IT and business on the same page, Spitz and other technology

THE RIGHT TEAM, THE RIGHT WAY

RAMON L. VEGA, a technologist at Pfizer, works side by side with employees in the company's consumer marketing group as part of Pfizer's collocation policy. He's a proponent of the practice, yet he and others say collocation isn't right for every IT worker.

He and other people experienced with this arrangement say the key to success is picking technical workers who understand business principles, can communicate effectively and display the interpersonal skills that make others comfortable. "It's having the right team, having the right individuals doing it," Vega says.

Even with the right people, companies will still encounter personnel challenges. Debra Rice, IT applications director at WellPoint, noticed a lot of awkwardness among employees initially when she moved technology workers into the HMO finance department to jump-start a major project. "There is a level of skepticism" among IT workers when they're asked to spend more time with business people, she says. "And it takes some successes in working this way for people to see the value and to embrace it."

And IT managers need to make sure that their employees who have been assigned to business departments don't feel abandoned, says Kavin W. Moody, executive director of the Center for Information Management Studies at Babson College. Cross-pollination with the business is useful for IT workers, but keeping in close touch with their IT peers is also essential.

"You have to provide for their careers," Moody says, noting that tech workers learn from one another and feed off of one another's creative energies. "They have to be linked into their own community."

– MARY K. PRATT

THE PRICE YOU PAY

DEBRA RICE bet on success when she decided to put her IT workers and finance folks together in one spot, but she didn't have to gamble much money on her decision.

Rice, IT applications director at WellPoint, a health benefits company, simply put the IT workers in a conference room on the floor occupied by the HMO finance department in the company's California facilities. Although Rice doesn't know precisely how much this setup cost to implement, she says "it was fairly minimal." The space was already wired, so the only expenses came from moving computers and phones into the room.

Moreover, she says, "the costs were overshadowed by successes."

The expense of collocation and other strategies that put IT and business unit workers together can be minimal, as in Rice's case, or it can be significant, experts say. So before you implement any staffing changes, you should try to anticipate and analyze the costs and potential returns of these alignment strategies.

Collocation is "good to do; it's just a question of whether [companies] have resources to do it," says Rick Swanborg, a professor at Boston University's School of Management and president of Icex Inc., a peer-to-peer advisory firm in Boston.

Some plans, such as Verizon Communications' policy of putting IT staffers into certain work areas to observe, will take those IT workers away from tasks that produce more immediate productivity results – a factor that makes the cost-benefit equation more difficult to compute.

Judith Spitz, Verizon's senior vice president of network systems, says the cost of "downloading IT to the field" was "not a huge investment." And although Spitz says she hasn't calculated firm ROI figures, she has no doubt that the returns on this investment far outweigh the costs.

– MARY K. PRATT

executives are finding success by putting them together. They have put IT staffers and their business partners side by side to develop a better understanding of one another's jobs so they can deliver better products.

> **"THERE'S A DIFFERENT SENSE OF TEAM BECAUSE WE'RE SITUATED TOGETHER."**
>
> DEBRA RICE, IT APPLICATIONS DIRECTOR, WELLPOINT INC.

In 2004, Debra Rice, IT applications director at WellPoint Inc., an Indianapolis-based health benefits company, was in charge of a multiyear, multimillion-dollar project to rewrite the software that handles payments to health care providers. After watching the effort flounder for a year, Rice says, she moved her IT workers in with finance in April. "It was very important to make sure both sides understood what we were going for," Rice says. "There's a different sense of team because we're situated together."

Now, with IT on the scene rather than siloed 15 miles away, the two groups are talking more, reviewing plans and answering questions in real time. "You can't do that on the phone or in e-mail," she says. "That's probably our biggest gain — that we don't have to repeat. We do it right together the first time."

Rice reports that the project is back on track, and three recent milestones were reached on time and within budget. "I don't think we would have achieved them if we were not collocating," she says.

Together All the Time

Such successes have pushed some companies to employee collocation all the time. Take the case of Pfizer Inc. The New York-based pharmaceutical company has had its operations-oriented IT workers embedded with business divisions for more than a decade.

"Once technology started to be viewed as something that could give a competitive advantage, it had to be closer to the business units to understand priorities," says Fred Bennett, Pfizer's director of operations.

So every Pfizer corporate function, from sales to finance to marketing, has at least one staffer from the company's business technology group physically working within the unit, a setup that promotes more interaction and teamwork, Bennett says.

"Collocation allows us to better understand our client and their challenges," adds Ramon L. Vega, a director/team leader in the business technology group.

Vega works with Pfizer's consumer marketing group. He says collocation helps him understand what marketing wants to achieve and how IT can support those goals. "When you have the siloed IT away from the client, you look at it as a commodity. You fill requests," he says. But with collocation, Vega says, "you are involved in the creation or definition of the business strategy from the beginning." (For more on Pfizer's alignment strategy, see "Natural Alignment," Feb. 6.)

Putting IT staff members with the business units they serve isn't a novel notion, experts say. But the practice isn't employed universally, either.

"If IT has little to do with strategy, you'll find [IT workers] sitting off to the side," says Kavin W. Moody, executive director of the Center for Information Management Studies at Babson College in Wellesley, Mass.

But as IT departments become more strategic, IT executives will — or at least should — look for ways to make the exchange of knowledge between their workers and the business people more effective, Moody says.

For example, Spitz found that her IT department needed closer links with the business as Verizon installed fiber-optic networks linking homes and businesses to the company's network. The project demanded innovations that the traditional arrangement — IT folks meeting but not necessarily interacting regularly with business counterparts — didn't promote, Spitz says.

"We understood that we [needed] very, very high flow-through," she says, meaning that there should be very little human intervention in processes such as ordering, provisioning and managing problems. "We had to get the hands out of the process and let the software do the work," she says.

So Spitz started putting IT workers in service centers to observe customer service reps on the job. "We sit next to them and watch what they're doing, and we're watching [for] 'user error' — where they're not using the system the way it was designed to be used. We ask why," she says.

Spitz points to two systems that have been implemented since this staffing shift. One allows workers to track service orders as they move through the pipeline; the other analyzes the network capacity of business customers who want to know if their existing networks can handle additional loads. Both systems drastically reduce the time workers spend manually completing the requested tasks.

Spitz says her IT staffers couldn't have developed either system so quickly and comprehensively if they hadn't experienced the initial problems firsthand. "It would have taken longer until the problem was raised to IT," she says, "and the system solution would have been half of what it ended up being."

Pratt is a Computerworld *contributing writer in Waltham, Mass. You can contact her at marykpratt@verizon.net.*

_THE INVASION

_DAY 11: These commoditized clones have taken over. Haven't been outside in days. Living off instant coffee and a tin of breath mints. :-(

_DAY 12: They're breeding. Multiplying. Multiple apps. Multiple databases. They must have a queen.

_Help...me....

DRILLING DOWN

Valero Energy's business and IT smarts have made it one of the most profitable players in the oil field. BY THOMAS HOFFMAN

BIG OIL makes big money, but not all big oil companies are the same. Valero Energy Corp.'s status as one of the world's most profitable petrochemical companies is largely a result of its willingness to buck the status quo and apply a strong mix of business and IT savvy to strengthen its strategic decision-making and operational management.

Most oil companies refine light, sweet crude oil, which contains fewer sulfurs and metals and is cheaper to process than so-called heavy, sour crude oil. But 22 years ago, Valero executives predicted that as global oil consumption continued to rise, it would be well positioned if it could process heavy, sour crude. Though heavy, sour crude costs more to process than premium oil, it is much cheaper to acquire and carries significantly higher profit margins.

As economic expansion in countries such as China and India has fueled increased global energy consumption, Valero's bet on heavy, sour crude "has placed it in the catbird's seat," says Fadel Gheit, an oil analyst at Oppenheimer & Co., a New York investment bank. That strategy has elevated San Antonio-based Valero from a relative unknown with just one refinery in 1997 to the biggest oil refiner in the U.S., with 16 domestic and two international facilities.

Valero, which was named after the Alamo (whose official name was the Mission San Antonio de Valero), finds itself in this enviable position because it was "so quick to recognize the [heavy, sour crude] trend — well before the rest of the market," says Gheit. This has been a critical advantage for Valero, he notes, particularly in an industry that relies heavily on business intelligence (BI) to quickly sift through real-time market data to price energy products profitably.

For years, executives at Valero have used BI tools to pore over daily, weekly and monthly reports from its SAP ERP system. The reports help them optimize profitability across the hundreds of crude oil, liquid propane and gasoline products it sells in several thousand locations, says Hal Zesch, Valero's senior vice president of information services and CIO.

"I don't know any other [energy] companies that have this depth of daily [views of profit and loss activities], and I've done a fair amount of checking," says Zesch.

Valero's use of BI doesn't stop there. For the past three years, maintenance staffers at its refineries have been using handheld devices to test the temperature and vibration levels of equipment, says Zesch. The information is uploaded to a central repository, where maintenance managers analyze the readings to determine whether a piece of equipment might require preventive maintenance.

Such attention to detail has enabled Valero's refineries to run at roughly 92% of capacity around the clock, says Zesch. That's in line with the rest of the U.S. oil industry, says Gheit, who places the industry's average refinery capacity at 90% to 93%. Still, Valero's focus on operational efficiency helps explain why *CFO* magazine last year ranked the company as the most profitable spender among all U.S. petrochemical firms. The study, prepared by Waltham, Mass.-based consultancy PRTM, ranked the 20 largest companies in the most capital-intensive industries by their adjusted return on gross fixed assets.

VALERO ENERGY CORP.

LOCATION
San Antonio

BUSINESS
Petrochemical refiner and marketer

2005 REVENUE
$82.2 billion

2005 EARNINGS
$3.58 billion

Fueled by Functionality

For all its success with BI, Valero isn't resting on its laurels. It's in the midst of evolving its BI strategy. In April 2004, the company launched a project to consolidate its use of six BI tools from vendors such as SAS Institute Inc. and Oracle Corp. and shift its operational front-end reporting onto Information Builders Inc.'s WebFocus reporting tool. The consolidation effort, which is targeted for completion by midyear, saved Valero an estimated $191,000 in software licensing fees in 2005 and is expected to save $478,000 more this year, says Kirk Hewitt, the company's director of reporting and financial systems.

I don't know any other [energy] companies that have this depth of daily [views of profit and loss activities].

HAL ZESCH, CIO, VALERO ENERGY

Although Valero's previous use of redundant BI tools may seem excessive, it pales in comparison with that of most large organizations. On average, big companies use at least 15 BI packages throughout their businesses because of acquisitions and decentralized purchasing among departments, says Keith Gile, an analyst at Forrester Research Inc. In fact, one of Gile's international government clients is using 22 different BI tools, he says.

The shift to WebFocus has also provided Valero executives with greater functionality than they had before, says Hewitt. Managers can now drill down on line-item budget information to analyze, for example, whether a promotional campaign for retail merchandise at service stations helped lift sales. They can also confidently scroll through daily financial reports instead of having to wait for dated monthly information, Hewitt adds.

Some of Valero's business divisions, such as its wholesale marketing group, had daily drill-down capabilities before the conversion to WebFocus, Hewitt says. But because of data integrity problems among the various BI systems in use at the time, the information on one manager's spreadsheet didn't always match what others were seeing.

Valero's conversion to WebFocus has helped executives like Marcel Dupuis gain access to more accurate operational data than they could get before. Dupuis is vice president of finance for the firm's Canadian marketing operations in Montreal. Since he began using the WebFocus tools in July, he has been able to sift through more detailed profit and loss information for each of Valero's 1,000 retail and 89 commercial service stations in Canada.

"Having detailed daily, weekly and monthly reports that we can generate and refresh ourselves allows us to react faster to the market and offer the best prices to our consumers," says Dupuis. Since crude oil prices are constantly fluctuating, having current data allows him and other executives to more accurately calculate net profit and loss for gasoline, diesel and other petroleum products.

By standardizing on a single reporting tool, Valero executives can also compare information across the company's business units more consistently. That's a lot harder for firms with multiple BI tools to pull off, notes Gile.

Now that plant controllers at Valero's 18 refineries are assembling similar capital expense reports, "it's easier for me to do an apples-to-apples comparison [on capital expenditures] between refineries," says Loren Bates, Valero's assistant controller of refining accounting

Valero has grown by increasing its capacity to process heavy, sour crude. That strategy included last September's $8 billion purchase of Premcor Inc., an independent petroleum refiner and supplier. But unlike other companies that typically achieve 30% to 70% of their acquisition savings through layoffs and operational consolidation, Valero doesn't dismiss any workers it inherits. Therefore, says Zesch, "we have to be very, very good at what we do."

That starts with having very good business intelligence.

CENTRAL INTELLIGENCE

Consolidated business intelligence suites make sense for large corporations, but some users are more comfortable with their BI point tools. **See page 27.**

IBM

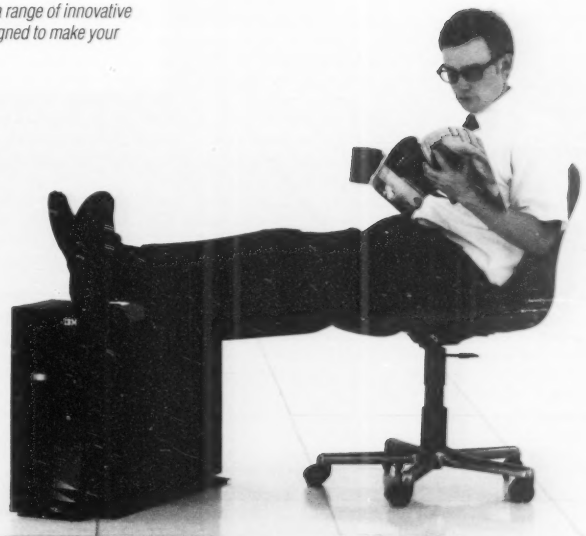
i have control. i have a new IBM System i5.™

i control complexity. *The one-of-a-kind System i5 is server, storage, software, database, and security, all in one.*

i control reliability. *The System i5 platform helps keep you up and running so you can focus on your business, not your I.T.*

i control flexibility. *This uniquely customizable platform lets you run multiple operating systems (Windows,* Linux,* AIX 5L,™ and i5/OS™) simultaneously.*

i control my I.T. destiny. *IBM Systems are a range of innovative servers and storage – like the System i5 – designed to make your infrastructure and your life simpler.*



IBM.COM/**TAKEBACKCONTROL**/i5

*Requires IXS or IXA to run Windows. Linux, Microsoft Windows and AIX 5L operating systems must be purchased separately. IBM, AIX 5L, System i5, i5/OS, and Take Back Control are trademarks or registered trademarks of International Business Machines Corporation in the United States and/or other countries. Linux is a trademark of Linus Torvalds in the United States, other countries, or both. Microsoft and Windows are trademarks of Microsoft Corporation in the United States, other countries, or both. Other company, product and service names may be trademarks or service marks of others. ©2006 IBM Corporation. All rights reserved.

MANAGERS' FORUM

WITH PAUL GLEN

ADVICE

I hope this monthly column will provide a lively exchange of ideas with IT managers. I'll do my best to answer your questions, and some of your responses will run alongside in "Readers Talk Back."

PLEASE SEND YOUR QUESTIONS, COMMENTS AND CRITIQUES TO ME AT **PGLEN@C2-CONSULTING.COM**

I am the project manager for a large software development project and often need help from other groups within the IT department whose members I don't control. When I can't get the people in the operations or networking groups to do the things I need on time, the sponsor gets quite upset with me, and I'm very frustrated that I can't tell him that it's not my fault. What can I do?

A project manager's job is a gasket job. You're often stuck between two or more hard, vibrating surfaces, and you need to keep them from flying apart. This role requires flexibility and a bit of impermeability. So steel yourself, because I think you've got to develop a thicker skin on both sides of this problem.

First, you've got to figure out whether your sponsor is really upset with you personally or just frustrated and unhappy with the state of the project. They are not the same thing. If your sponsor has a short temper or a volatile personality, it may be rather difficult to tell.

In the interest of developing thicker skin, it's generally best to distance yourself from your sponsor's anger, no matter where he directs it. He's not really mad at you anyway; he's mad at your job. The project manager of your project has failed to keep things on track. It's unlikely that he considers you individually to be a bad person.

Once you've stepped back from the heavy emotions, it's probably a bit easier for you to understand and identify with his frustration.

In fact, you can now feel entitled to a bit of your own frustration, a perfectly normal response to your inability to get others to support your project as you would like. Feel free to express your frustration and commiserate with your client without casting blame at your colleagues.

On the other side of thicker skin, I can't agree with your assumption that you are completely blameless in this situation. Part of a project manager's job is to coax, cajole, convince and even bully others to get done what needs to be done. If you haven't been able to get the appropriate support, what have you done to get it? What more could you do?

It's not in a project manager's job description to be the best-liked person in the building. Sometimes managing these sorts of conflicts can be unpleasant, but that's just part of the job.

Is there any particular advantage for a manager of technical resources (people) to really understand what they do?

This is the exact opposite of the question that I'm usually asked. Ordinarily, I'm asked whether it's critically necessary that a manager understand *more* about the technology than the staff, rather than understand less or nothing at all. But I think this is a fair and reasonable question, too.

To some degree, it depends on what your role as supervisor is.

If you're a resource allocation manager — someone whose job is to assign people to projects rather than to supervise their daily work — it's less important to understand than it would be otherwise.

But I still think that it's worth a resource manager's time to understand at least a bit. You'll be able to make better assignments and understand the technical career paths of the people for whom you serve as traffic cop.

If you're a supervisor of the technical people, it becomes more important. You have to know what they are doing in order to manage both the people and their work.

At the same time, there are dangers associated with understanding too many of the details of the technology that people you supervise work on. Many managers want to try to do both the managerial job and the technical job at the same time. Generally, that's neither possible nor desirable.

How do you deal with vice presidents who tell you to cut 100 hours out of the project when you know it can't be done in that time frame and will run over?

It depends on your relationship with the vice president. If you've got a strong relationship and have the credibility to speak plainly, start out by telling him that it can't be done in the way that he wants.

Then, whether or not you can speak plainly, it's time to pull out the old iron quadrilateral of IT projects (budget, schedule, feature set and quality) and explain how it works.

Let him know that you'd be happy to cut 100 hours out of the schedule, but then discuss which other priorities will have to be adjusted in order to accommodate the change. Feasibility permitting, he can have the choice of cutting product features or scope or sacrificing quality.

If he complains that that's not good enough, tell him that you appreciate what he wants, but that your professional integrity prevents you from lying to him to avoid his displeasure.

The truth of most of these situations is that you can't hire someone who can really do the project that much faster and cheaper; you can only hire someone who's willing to lie about it. ◗

READERS TALK BACK

More on Entering The Workforce

Hi Paul,
I have over 30 years in IT, but I just completed my bachelor's in management. I think what surprised me about going back to school was the number of veterans getting their degrees now. It just shows that learning is lifelong. When entering the workforce for the first time, it is important to know when to keep your head down and when to speak. Entry-level employees need to be very observant and be lifelong learners. I agree that school is important, but there is nothing like experience. New learners need to some day look back on their careers with satisfaction, knowing that they were self-driven to succeed. The most important thing is to do what excites them. Never settle for the mundane!

– JPJ

Thanks for sharing your experience. Congratulations on going back to school. It takes a lot of determination and is not as easy to fit into your life as an adult.

I am a firm believer that the best learning takes place at the intersection of experience and theory. The more experience you have to bring to theory, the better able you are to make it meaningful and alive. Personally, I took one year off from college to work and definitely returned with a better sense of the use and meaning of education. I can only imagine that with 30 years' experience to reflect on, you probably get a great deal out of your studies, and quite a bit more than the teenagers in the next chair.

– Paul Glen

Hi Paul,
As a graduating student, there are many things that go through your mind while you are looking for that first job. As a graduating student with 30 years of experience, there were still many things traveling the caverns of my mind, but I am certain they were different than those of the rookie. It is funny you say "intersection," because it reminds me of Tom Hanks at the end of the movie, *Castaway*. When I was done with school, I had that same feeling.

– JPJ

Career Watch

What It Takes To Be World-class

How do IT organizations in world-class companies differ from those in typical companies? The Hackett Group defines several key differentiating characteristics in its "Book of Numbers" research report, released this month.

1 **World-class CIOs are far more likely to sit on the company's primary management committee** (see chart).

2 **World-class CIOs are much more likely to report to the CEO** (71% of CIOs at world-class companies, compared with 20% at typical companies). Among typical companies, the most common reporting relationship is for the CIO to report to the chief financial officer (33%). Only 14% of world-class CIOs report to the CFO.

3 **Managers in the IT organizations of world-class companies are more likely to have advanced degrees, as are members of the IT professional staff.**

4 **Sixty-seven percent of world-class IT organizations are controlled centrally, compared with 54% for typical companies.**

Moreover, while all world-class IT organizations in the study have eliminated local reporting for IT functions, 9% of typical organizations still use this approach. According to Hackett, centralization lets world-class IT organizations coordinate their efforts more effectively while ensuring that IT goals mesh with those of the business.

Hackett gathers its performance metrics from 2,000 of the world's leading companies, including 96% of the businesses that make up the Dow Jones Industrial Average. The research firm defines a world-class company as one that scores in the top quartile in both efficiency and effectiveness performance metrics verified through benchmarking studies.

A Seat at the Table

Percentage of companies where CIO sits on the primary management committee, 2005:

Typical companies	World-class companies
56%	100%

SOURCE: THE HACKETT GROUP, ATLANTA

PAGE COMPILED BY JAMIE ECKLE.

Lucy Sanders

TITLE: **Founder and CEO**

ORGANIZATION: **The National Center for Women & Information Technology (NCWIT), Boulder, Colo.**

Q&A

The U.S. Department of Labor predicts that more than 2 million technology-related jobs will be added to the nation's workforce by 2012. But according to recent research conducted by the Information Technology Association of America, the percentage of women in the U.S. IT workforce has fallen by 18.5% over the past eight years. To help address this decline, Cisco Systems Inc. recently began a partnership with the NCWIT to increase awareness of educational and career opportunities for girls and women in science, technology, math and engineering. Thomas Hoffman spoke with Lucy Sanders about the group's work with Cisco and what they hope to achieve.

How did this partnership between Cisco and the NCWIT come about? Cisco is part of the NCWIT Workforce Alliance. In that role, Cisco is working hard to make sure that more girls and women are interested in careers in IT. In that regard, they wanted to do this awareness campaign, and we thought it was a natural partnership.

Any idea what percentage of the U.S. IT workforce is made up of women right now? It's about 29%, and it's on a downward trend. What's more alarming is the drop in enrollment in computer science programs, down about 18% [for men and women] at U.S. colleges and universities. And only 15% of high school students are taking advanced placement tests in computer science. Some companies say they feel like they're OK today in terms of female participation in IT, but they don't expect to be OK in the future.

What are some steps that Cisco and the NCWIT plan to take to increase awareness of career opportunities for women in IT? This awareness campaign is a really important first step. We're trying to get the word out to parents and educators that this is a wonderfully creative career. There's a perception that it's singular and geeky. But I know firsthand that it's an exciting and creative and socially relevant career. So we're sending out materials to parents and educators. That's an important first step. And there will be more. We really do need to mobilize parents to make them realize the importance of these career opportunities.

Side Effects

Career prospects for security professionals who report to a chief information security officer take a hit when the CISO starts reporting to someone outside the IT organization. Gartner Inc. estimates that in 30% of its client companies, the CISO reports to a chief risk officer, who in turn reports to the CEO or the board of directors. It makes things easier for the CISO, but Gartner says his direct reports end up with restricted opportunities to move up within the larger IT organization and little in the way of career development. (For more on security careers, see "Security Convergence," Feb. 13)

$106,326
Median 2005 salary for CISOs*

*SOURCE: SANS INSTITUTE 2005 SURVEY OF 4,250 SECURITY PROFESSIONALS, JANUARY 2006. THIS SALARY FIGURE INCLUDES SALARIES FOR OTHER TITLES, SUCH AS CHIEF RISK OFFICER, CHIEF PRIVACY OFFICER, CHIEF SECURITY OFFICER, DIRECTOR OF SECURITY AND SECURITY MANAGER.

66%
Percentage of IT employees reimbursed 100% for their training by their companies who say they're not looking for new jobs.

56%
Percentage of IT employees whose companies don't support them at all in their training who say they will look for employment elsewhere.

SOURCE: THE COMPUTING TECHNOLOGY INDUSTRY ASSOCIATION INC. SURVEY OF 462 IT WORKERS, JANUARY 2006

EXEC TRACK

Bridges Is New CIO At Delta Airlines

SHIRLEY W. BRIDGES has been appointed CIO at Delta Air Lines Inc. and president and CEO of Delta Technology, the airline's wholly owned IT subsidiary. A 16-year veteran of Atlanta-based Delta, Bridges was most recently chief operating officer at Delta Technology. Previously, she was vice president of airline operations systems.

Chinese Web Search Firm Taps Liu as CTO

Baidu.com Inc., a Beijing-based Chinese-language Internet search provider, has promoted JERRY LIU to chief technology officer. Liu was Baidu's first employee in 2000 and became vice president of engineering later that year. Previously, he was an associate professor of technology at Peking University, where his team developed the first Chinese-language search engine.

Domino's Delivers McGlothlin as CIO

Domino's Pizza Inc. in Ann Arbor, Mich., announced the appointment of CHRISTOPHER K. McGLOTHLIN as executive vice president and CIO. He will report to Chairman and CEO David A. Brandon. McGlothlin had worked at Louisville, Ky.-based Yum Brands Inc. since 1995, most recently as vice president of operations technology. Previously, he was senior director of Yum restaurant excellence and director of KFC finance/strategic planning.

U.K.-based Hotelier Names First CIO

InterContinental Hotels Group PLC in Windsor, England, has appointed TOM CONOPHY to the newly created position of CIO. Conophy, who will report directly to CEO Andrew Cosslett and sit on the executive committee, was most recently CTO at Starwood Hotels & Resorts Worldwide Inc. Before that, he was senior vice president for strategic architecture at Sabre Inc.

BARBARA GOMOLSKI

Confessions of a Full-Time Telecommuter

THIRTEEN YEARS AGO, I embarked on a personal and professional adventure when I accepted a job in the Boston area while living in California, with the intention of telecommuting full time. The forward-thinking company that hired me (which happens to publish this newspaper) recognized that it could hire the best people if it cast its hiring net nationally. Now, of course, telecommuting is a norm and a perk that many IT professionals have come to expect. Still, it's not a given in all companies.

BARBARA GOMOLSKI, a former *Computerworld* reporter, is a vice president at Gartner Inc., where she focuses on IT financial management. Contact her at **barbgomolski@yahoo.com.**

Based on more than a decade of experience, here are my observations and suggestions about telecommuting, some of which may surprise you:

■ For self-motivated employees, telecommuting means a productivity boost. Focused and dedicated individuals will get far more work done at home than in an office.

■ Telecommuting improves job satisfaction and loyalty for employees who want to do it and are well suited to the arrangement.

■ Some employees will prefer to come to the office because home is not conducive to work. The key is to have the flexibility to support the differing work styles of various employees.

■ Organizations that fail to allow flexible work arrangements will find it increasingly difficult to attract the best candidates.

■ In some organizations, telecommuters face limited promotion opportunities because "managers" must work in an office. If you are building a virtual organization, the same opportunities should be open to everyone. It's harmful to the company if telecommuters are relegated to certain jobs by virtue of where they work.

■ It's impossible to "check up" on telecommuters, and you shouldn't even try. If you don't trust people and you don't feel confident that you can measure their performance, don't allow telecommuting. Don't call telecommuters at 8 a.m. or 5 p.m. to see if they are in the office. Respect that people have different work styles. Some may like to get into the office a few hours early but take a two-hour lunch. As long as they are available when they need to be, be satisfied. Focus on outcomes, not work styles.

■ New employees who telecommute should be assigned mentors to help them navigate issues that are unique to telecommuters, such as connecting from home.

■ Companies are saving a bunch of money on office space as a result of telecommuting. As working from home becomes more widespread, employees will expect to be compensated for the costs of running their home offices. Today, companies typically pay for things like phones and high-speed Internet connections, but not utility costs or rent. Expect that to change in the next 10 years.

■ The ideal arrangement is to have the employee come to the office at least one day a week, so that the individual can develop an understanding of the company and its processes.

■ Organizations that allow telecommuting must have better work and management processes than those that expect workers to come to an office every day. The flexibility of telecommuting requires more rigor in the area of business processes. For example, impromptu meetings are just about impossible in a virtual work environment, so planned meetings and formal processes become essential. Otherwise, you risk communicating only by e-mail.

■ Organizations can feel confident about telecommuters' performance, provided the performance metrics are well defined and tracked. Many employees who telecommute have performance goals that are quite tangible — almost quotalike.

■ Companies with flexible telecommuting policies tend to develop a more diverse workforce, which is good for business.

■ Organizations that depend on a high degree of collaboration among employees must support telecommuters with the right tools and technologies. In the early days, we used Internet e-mail, and we uploaded text files using pcAnywhere. Today, of course, the technology is much more advanced for supporting virtual collaboration. Use it.

■ Telecommuting should be considered a privilege, not a right. Too many companies have applied a blanket approach, allowing everyone the same telecommuting status. The truth is that not all employees are self-motivated or honest.

In the early days of telecommuting, I was an evangelist. Now I'm a bit more pragmatic about it. In the main, telecommuting is a win-win for employees and employers. However, it also presents unique challenges that some organizations are simply not prepared to face.

WANT OUR OPINION?

For more columns and links to our archives go to **www.computerworld.com/columns**

Ad's Placed Weekly

Didn't find the IT Career Opportunity you were looking for?

Check back weekly for fresh job listings placed by top companies looking for skilled IT professionals like you!

IT|careers
800.762.2977

Systems Analyst.
Develop and implement business applications systems using SAP R/3 and Oracle. Gathering business requirements from users and develop solution and create specs for ABAP reports. Perform in EDI setup of purchase orders and sales orders. Perform custom modifications to EDI function modules. Create and modify custom match codes and BDC programs to interface with different sub-systems. Creation of data dictionary objects, tables, check tables, number range objects and match code objects. Perform functional and technical implementation and configuration of SAP R/3 modules such as Finance and Controlling. Duties entail working with C++, ABAP/4, SAP Script, Java, Unix, and Windows NT/2000. Will provide a competitive salary and benefits. Email resume to hr@pixelsystemsinc.com or mail to Pixel Systems Inc., 116 Village Blvd., Suite 200, Princeton, NJ 08540.

CrossCountry Energy Services, LLC has openings for the following positions in Houston, Texas:

IT Specialist (Job Code 06-014) Provide day-to-day primary applications support for the Operations Services Division, as a member of the Technology Operations Team; provide support for and maintain the emergency response system which provides emergency information to natural gas pipeline facilities.

IT Specialist (Job Code 06-015) Research, design, and develop computer software systems for the natural gas pipeline industry in conjunction with hardware product development, applying principles and techniques of computer science, engineering, and mathematical analysis.

Please submit resumes to: CrossCountry Energy Services, LLC ATTN: Human Resources 5444 Westheimer Road, WT.561B Houston, Texas 77056 OR sharon.roberts@panhandleenergy.com Responses failing to list job code will not be considered. No phone calls or agencies please. EOE

CyberThink Inc. is a NJ based IT consulting comp. with clients all over USA. We have multiple openings for IT Professionals (Programmers /Software Eng/Sys. Analysts/Admins /Net. Eng/DBA) with Bach in Comp/MIS/ Engineering or related field + 2 yrs exp in:
ERP/CRM: Oracle Applin, Peoplesoft, SAP, JD Edwards & Siebel (Job#F061)
BI: Hyperion, Informatica, BO, Cognos, Brio, Microstrategy. (Job #F062)
Bus. Applin/Prog: Oracle, SAS, VB/ ASP.NET, Crystal Repts, J2EE/JAVA, ODBC, Pro*C, C/C++, VC++, C#, PL/SQL, Repts/Forms, RDBMS, Web Methds/Sphere (Job#F063)
Admin/Network: Unix, Solaris, HP, AIX, Linux, Win NT/2000, Cisco, VoIP, LAN/WAN/SAN, SNMP, Novell. (Job#F064)
DBA:Sybase/SQL/Essbase/DB2/ Oracle (Job#F065)
Frequent travel to client sites required for above positions.
We also have positions open for Mkt Research /Bus. Analyst /Tech. Recruiter at our NJ location. (Job#F066)
Mast or equiv + 1 yr exp reqd for senior positions. Will accept Bach or equivalent + 2 yrs exp for associate level positions. Make specific mention if you are applying senior or associate level positions. Send resume to cyberThink Inc., 1125 US Highway 22 West, Bridgewater, NJ 08807, Attn: (job #). Specify the skills in which you are seeking job. EOE

Marlabs, Inc is an Edison, NJ-based software consulting company. The candidates will be assigned to work at client sites across the US. We have multiple openings for Software Professionals (Project Managers/ Team Leads / Software Engineers, Programmer Analysts, System/Network Analysts and Administrators, Database Administrators and Application Developers, System and Business Analysts, Quality Assurance/testing) with several of the following skills and relevant experience:

Web Technologies.
Web Tools such as J2EE, Java, JSP, Java Servlets, EJB, XML, NET, HTML, DHTML, UML, ASP, Visual Interdev, MTS, & PERL/CGI, PHP, Visual Basic/Visual Studio.
Web Application Servers such as WebObjects, SUN JES, Web Logic, WebSphere, ColdFusion, ATG, Netscape, IIS & IBOLT, Dominos, Documentum, iplanet, Oracle, J2EE, and related applications.
Internet, Intranet and other Web technologies and applications – including Architecture, Server-Side and Middle-Tier development.

Application development:
Application Development integrating database backend, a middle tier server and a GUI/Web interface.
Object Oriented Application development using technologies such as C, C++, C##, Java, etc.
Statistical Applications such as SAS/SPSS.
Development Tools such as C, C++, Visual Studio, Visual C++, Visual Basic, PowerBuilder, Lotus Notes & .NET (including VB.NET, ASP.NET and C##.NET).
Data Mining / Data warehousing/Business Intelligence using applications such as Business Objects, SAS, Brio, Informatica, Microstrategy, Statistica, Eagle Pace, Cognos & ERWIN.
ERP/CRM: Oracle Applications, Siebel, Peoplesoft, Broadvision & SAP, Peoplesoft, BAAN, JD Edwards, Microsoft/Great Plains.
Databases: (mainframe/midrange/client-server) Oracle, Informix, Sybase, SQL Server, MySQL, DB2 and Cobol.

Systems Administrators with Experience in several of the following: System (UNIX, Windows / Windows NT, LINUX, RTOS, Sun Solaris, AIX, HP), Network (LAN/WAN/ CISCO/HP) Administration, Security Analysis and Design, Database Administration.

Business Analysts, Security, and Quality Assurance professionals for any or all of the above technologies and various industry sectors such as business, finance, telecom, pharmaceutical etc. Also specialists in regulatory / statutory compliance such as HIPAA or SarbOx, business analysis, security/audit policy, certification and/or accreditation.

All positions require Bachelor's or equivalent and 2-5 years of industry experience, or a Master's degree. Edn must be Engg, CompSci, CIS, Science, Math, Business, or related. Relocation possible to client locations which will be anywhere in the continental US. All responses to this ad must include the Job Code reference 60202. Marlabs is an equal opportunity employer. Submit resume to: Marlabs, Inc. c/o Computerworld/IT Careers, PO Box 9171, Framingham, MA 01701-9171.

Labor Certification Ads

Are you an individual, agency or law office needing to place ads to fulfill legal requirements?

Let us help you put together an efficient, cost effective program that will help you place your ads quickly and easily.

For more details, contact us at: 800.762.2977

IT|careers

ITCI is looking for Computer Professionals having Masters or equivalent in CS, MIS, CIS, Math, Tech, Bus, Engineering, or related field with one-year experience in any one of the following skills: 1. Oracle, Sybase, DB2, Java framework, API, GUI, J2EE, Weblogic Application Server, CORBA server, C++, IDL interfaces, ADO, ASP, EJB, Struts, Shell Scripts, Solaris, and Windows NT. Refer SK1001. 2. Oracle, SQL Server, Java framework, API, GUI, J2EE, Weblogic Application Server, CORBA server, C++, IDL interfaces, ADO, ASP, EJB, Struts, Shell Scripts, Solaris, and Windows NT. Refer OG1002. Will provide a competitive salary and benefits. Send Resume to ITCI, 111 Broadway, 16th Floor, New York, NY 10006 or email to: mpladze@itci.com.

ValueMomentum is looking for Computer Professionals with experience in any of the following skills sets:
1. J2EE, Client Server, Mainframe, Project Life Cycle, Websphere, Weblogic, Apache, V2E, RUP, Waterfall, Test Director, Rational Test Suite, Silk Performer, Load/Win Runner, Oracle, DB2, Java, Visual Basic, Developer 2000, C++, Unix, & Windows NT. Require MS/ Equivalent in CS, MIS, CIS, Math, Tech, Bus, Eng (any field) or related W/2 yr of Exp & Refer AviVish.
2. Technical Requirement Collection, QA Feasibility Analysis, QA Technical planning, QA development activities, QA Standards, Review, Software Quality control testing in cross-platform environment, Oracle, Sybase, Mercury, Rational, Websphere, Weblogic, QA on Database, J2EE, WinRunner, QTP, XDE, Load Runner, V2E, RUP, Waterfall, Unix and Windows NT/2000. Require BS/Equivalent in CS, MIS, CIS, Math, Tech, Bus, Eng (any field) or related W/2 yr of Exp & Refer QA Tech. Multiple Positions.
Will provide competitive salary & benefits. Send resume to ValueMomentum, 3001 Hadley Road, Unit 8, South Plainfield, NJ 07080 or email to: hr@valuemomentum.com

Sys Eng wanted by Domain Information Services, New Brunswick, NJ. MS in MIS or related area w/ min 2 yrs exp designing & optimizing LAN/WAN. Exp w/ TCP/IP, DHCP, DNS, SMTP, Windows AD, Exchange, Access, SQL, remote access. Tasks incl analyzing infrastruct necessities for enterprises; providing tech documentation w/ approp tools; plan, implement & admin wired & wireless network infrastruct; estab & enforce security measures on SPAM/virus protection. Resumes to careers@computerhelpnj.com

Thomson, Inc. is seeking a Corporate Research Lab Manager, Compression Lab for its Princeton, NJ location to manage and lead the research and development of high-quality video coding solutions with application to the multimedia and entertainment industry. Must have a Master's degree or equivalent in Electrical Engineering or related field plus two years of industrial experience in the related occupation of development of video compression solutions. Salary commensurate with experience. Send resume to Thomson, Inc., HR - Job # 9015, 10330 North Meridian Street, Indianapolis, IN 46290-1976.

Programmer Analyst needed w/Bachelors or foreign equiv in Info. Systems or Comp. Sci or Engineering or Math & 2 yrs exp to analyze, design, develop, test & document business software, implement & support applications for data warehousing using ETL (extraction transformation loading) processes & ETL tools, reporting tools, Visual Basic.Net, XML, HTML, Java, Oracle, SQL server, Informix, PL/SQL, T-SQL on Windows & Unix platforms. 2 yrs exp as Systems Engineer is acceptable. Mail resumes to: Empower Technology Solutions Inc., 196 Princeton Hightstown Rd., Bldg. #2, Suite 14, West Windsor, NJ 08550 Job loc: West Windsor, NJ or in any unanticipated locations in the USA.

Programmer/Analyst -
Payroll and HR (Atlanta, GA) - multiple openings: using various web technologies, app servers, db and tools, work on complex payroll, tax, benefits and HR apps. M-F, 9-5, salary commensurate with experience. Required bachelor's degree in Computer Sci, Electronics/ Communications Engineering & 3 yrs in the job or 3 yrs as Software Engineer - Financial, HR an ERP Solutions/Sr. Internet Software Developer - Online Banking Management System. Resumes to ADP HR by fax to (212) 591-6623, or by e-mail to HiringInfo@aol.com. EOE

Computer Consultant Software Engineer, 40-hr wk.; job located in Morrisville, NC; Bachelor's Computer Science or foreign degree equiv. + 1 yr exp in job offered; Design and develop software systems; analyze information; modify software; submit resume: Lorraine Morgan, H.R., Perimeter Internetworking, 2525 Embassy Dr. S., #10, Cooper City, FL 33026.

With 35 branch offices located across the US, COMSYS is actively recruiting for the following positions.

Programmer Analyst– metro Richmond, VA– Code # RI140
Statistical Database Analyst– metro Kalamazoo, MI– Code # PM100
Quality Assurance Analyst– metro Schumburg, IL– Code # SI100
Programmer Analyst – metro Miami, FL– Code # MI100
Business Analyst– metro Deerfield Beach, FL– Code # DB110

Roving employment to varying jobsites throughout the US. Please refer to appropriate job code when submitting resume to: COMSYS, Attn. Nancy Theriault, 15455 N. Dallas Pkwy., Ste 300, Addison, TX 75001. EOE /M/F/D/V

Systems Engineer:
Install and maintain Windows Servers and workstations, Lotus Domino Servers. Build and configure Compaq Proliant using Compaq Smart Start. Monitor/Administer network servers using Sitescope, Insight Manager Utility, Whatsup Gold, Troubleshoot TCP/IP, network connections, DNS. Administer Lotus Domino backups using ArcServe. Administer email firewall servers running Tumbleweed/ cloudmark. Install/maintain PowerChute by APC. Bachelor's degree or foreign equivalent, in Computer Science, Engineering with 2 years of experience in the job offered or related occupation. Send resumes to: Comtech, LLC, ATTN: HR, 8618 Westwood Center Drive, Suite # 100, Vienna, VA 22182

Computer Systems Analyst, 40-hr wk.; job located in Morrisville, NC; Bachelor's Computer Science + 1 yr exp in job offered; analyze business and data processing problems; user requirements, system requirements; submit resume: Lorraine Morgan, H.R., Perimeter Internetworking, 2525 Embassy Dr. S., #10, Cooper City, FL 33026

Software QA Engineer needed for America's Collectibles Network in Knoxville, TN. Position requires Master's degree or equivalent in Computer Science, Electrical Engineering, Mathematics or related field and 3 yrs. of software QA experience testing web and client/server applications in multi-platform environments using an Oracle database. 3 yrs. experience must consist of Segue SilkTest and Segue SilkPerformer. Please forward resumes to: mintha.tidwell@tv.com.

COMPUTERWORLD HEADQUARTERS

One Speen Street, P.O. Box 9171
Framingham, MA 01701-9171
Phone: (508) 879-0700
Fax: (508) 875-4394

PRESIDENT/PUBLISHER/CEO
Matthew J. Sweeney
(508) 271-7100

EXECUTIVE ASSISTANT TO CEO/ CORPORATE COMMUNICATIONS MANAGER
Laureen Austermann
(508) 820-8522

VICE PRESIDENT/ GENERAL MANAGER ONLINE
Martha Connors
(508) 620-7700

VICE PRESIDENT/MARKETING
Matt Duffy
(508) 820-8145

DIRECTOR/ HUMAN RESOURCES
Julie Lynch
(508) 820-8162

EXECUTIVE VICE PRESIDENT/ STRATEGIC PROGRAMS
Ronald L. Milton
(508) 820-8661

VICE PRESIDENT/ONLINE SALES
Gregg Pinsky
(508) 271-8013

EXECUTIVE VICE PRESIDENT/COO
Matthew C. Smith
(508) 820-8102

VICE PRESIDENT/ EDITOR IN CHIEF
Don Tennant
(508) 620-7714

VICE PRESIDENT/CIRCULATION
Debbie Winders
(508) 820-8193

CIRCULATION
Sr. Circulation Specialist/Diana Turco, (508) 820-8167

PRODUCTION
Vice President Production/Carolyn Medeiros; Production Manager/Kim Pennett; Print Display Advertising: (508) 820-8232, Fax: (508) 879-0446; DISTRIBUTION: Director of Distribution and Postal Affairs/Bob Wescott

STRATEGIC PROGRAMS AND EVENTS
Vice President Strategic Initiatives/Leo Leger; Vice President Business Development/John Amato; Senior Director, Event Sponsorship Sales/Ann Harris; Vice President, Event Marketing and Conference Programs/Derek Hulitzky; Director, Event Management/Michael Meleedy; Program Director, Computerworld Honors/Sandy Weill; Business Development Specialist/Colin Longval; Business Development Specialist/Chris Leger; Business Development Specialist/Amy McLellan; Marketing Manager/Timothy Johnson; Conference Manager/Nancy Felshoim; Sr. Marketing Specialist/Duncan Newell; Executive Programs Specialist-Computerworld Honors/Deborah Lee; Executive Programs Specialist-Executive Assistant/ Kelly McGill; Custom Events Specialist/Jean Lee; Operations Specialist/Chris Johnson; Web Development Specialist/Michelle Remeny; Customer Service Coordinator/Josh Ryan;Audience Development Coordinator/Shari Ebb, One Speen Street, Box 9171, Framingham, MA 01701-9171, (508) 879-0700, Fax: (508) 626-8524

ONLINE ADVERTISING
Director of Online Sales/Sean Weglage, (415) 978-3314, Fax: (415) 543-8010; Online Sales Manager, East Coast/James Kalbach, (610) 971-1588; Online Account Executive/April Hughes, (415) 978-3311, Fax: (415) 543-8010; Online Account Executive/Matthew Wintringham, (508) 270-3882, Fax: (508) 270-3882; Senior Account Services Manager/Bill Rigby, (508) 820-8111, Fax: (508) 270-3882; Online Account Services Specialist/Kathryn Goryl, (508) 620-7760, Fax: (508) 270-3882; Online Sales Assistant/Kathy Snow (508) 270-7112; One Speen Street, Box 9171, Framingham, MA 01701-9171, Fax: (508) 270-3882

IT CAREERS ADVERTISING SALES OFFICE
Director of Sales/Laura Wilkinson, (847) 441-8877, Fax: (847) 441-8878; One Speen Street, Framingham, MA 01701

LIST RENTAL
POSTAL: Rich Green, (508) 370-0832, e-mail: rgreen@idglist.com. E-Mail: Christine Cahill, (508) 370-0808, e-mail: ccahill@idglist.com. MAILING ADDRESS: IDG List Services, P.O. Box 9151, Framingham, MA 01701-9151, Fax: (508) 370-0020

COMPUTERWORLD SALES OFFICES

PRESIDENT/PUBLISHER/CEO
Matthew J. Sweeney
(508) 271-7100
Fax: (508) 270-3882

SALES INTEGRATION DIRECTOR
Laurie Marinone
(508) 628-4823
Fax: (508) 270-3882

NORTHWESTERN STATES
ACCOUNT DIRECTOR: Jim Barrett (415) 978-3306; ACCOUNT EXECUTIVE: Coretta Wright (415) 978-3304, 501 Second Street, Suite 114, San Francisco, CA 94107, Fax: (415) 543-8010

BAY AREA
ACCOUNT DIRECTORS: Jim Barrett (415) 978-3306, Sara Culley (415) 978-3307; ACCOUNT EXECUTIVES: Emmie Hung (415) 978-3308, Coretta Wright (415) 978-3304, 501 Second Street, Suite 114, San Francisco, CA 94107, Fax: (415) 543-8010

SOUTHWESTERN STATES
ACCOUNT DIRECTOR: Bill Hanck (949) 442-4006; ACCOUNT EXECUTIVE: Jean Dellarobba (949) 442-4053, 19200 Von Karman Avenue, Suite 360, Irvine, CA 92612, Fax: (949) 476-8724

EASTERN CENTRAL STATES/ INDIANA
ACCOUNT DIRECTOR: Peter Mayer (201) 634-2324; ACCOUNT EXECUTIVE: John Radzniak (201) 634-2323, 650 From Road - 2nd Floor, Paramus, NJ 07652, Fax: (201) 634-9289

CENTRAL STATES
ACCOUNT DIRECTOR: Bill Hanck (949) 442-4006; ACCOUNT EXECUTIVE: Jean Dellarobba (949) 442-4053, 19200 Von Karman Avenue, Suite 360, Irvine, CA 92612, Fax: (949) 476-8724

NEW ENGLAND STATES
ACCOUNT MANAGER: Deborah Crimmings (508) 271-7110; SALES ASSOCIATE: Jess Roman (508) 271-7108, One Speen Street, Framingham, MA 01701, Fax: (508) 270-3882

METRO NEW YORK
ACCOUNT DIRECTOR: Peter Mayer (201) 634-2324; ACCOUNT EXECUTIVE: John Radzniak (201) 634-2323, 650 From Road - 2nd Floor, Paramus, NJ 07652, Fax: (201) 634-9289

SOUTHEASTERN STATES
ACCOUNT DIRECTOR: Lisa Ladle-Wallace (904) 284-4972, 5242 River Park Villas Dr., St. Augustine, FL 32092, Fax: (800) 779-8622; SALES ASSOCIATE: Jess Roman (508) 271-7108, One Speen Street, Framingham, MA 01701, Fax: (508) 270-3882

ADVERTISER'S INDEX

AT&T 53
www.TheNewATT.com
CDW Corporation 7
www.cdw.com
EMC 22, 23
www.emc.com
FileNet 5
www.filenet.com
Fujitsu Computer Systems Corporation 13
www.shopfujitsu.com/LifeBookT4000
Hewlett-Packard Enterprise 2
www.hp.com
Hewlett-Packard ProCurve 51
www.hp.com
Hyperion 35
www.hyperion.com/hyatt
IBM Systems Leadership 41, 43
www.ibm.com
Intel 11
www.intel.com
InterSystems Ensemble 33
www.intersystems.com
Microsoft Linux 14-15
microsoft.com/getthefacts
Microsoft SQL G1-4
microsoft.com/bigdata
Novell 26
www.novell.com
Oracle Corp. 54
www.oracle.com
Pillar Data Systems 38
www.pillardata.com
Ricoh 21, 29
www.ricoh-usa.com
SAS 18-19
www.sas.com
Sharp 9
www.sharpusa.com
SonicWall 17
www.sonicwall.com

This index is provided as an additional service. The publisher does not assume any liability for errors or omissions.

INTERNATIONAL DATA GROUP

CHAIRMAN OF THE BOARD
Patrick J. McGovern

PRESIDENT, IDG COMMUNICATIONS
Bob Carrigan

COMPUTERWORLD is a business unit of IDG, the world's leading technology media, research and event company. IDG publishes more than 300 magazines and newspapers and offers online users the largest network of technology-specific sites around the world through IDG.net (www.idg.net), which comprises more than 330 targeted Web sites in 80 countries. IDG is also a leading producer of 168 computer-related events worldwide, and IDG's research company, IDC, provides global market intelligence and advice through 51 offices in 43 countries. Company information is available at www.idg.com.

IDG

Have a problem with your Computerworld subscription?

We want to solve it to your complete satisfaction, and we want to do it fast.
Please write to: **Computerworld, P.O. Box 3500, Northbrook, IL 60065-3500.**

Your magazine subscription label is a valuable source of information for you and us. You can help us by attaching your magazine label here, or copy your name, address, and coded line as it appears on your label. Send this along with your correspondence.

ADDRESS CHANGES OR OTHER CHANGES TO YOUR SUBSCRIPTION
All address changes, title changes, etc. should be accompanied by your address label, if possible, or by a copy of the information that appears on the label, including the coded line.

YOUR NEW ADDRESS GOES HERE: **ADDRESS SHOWN:** ❑ Home ❑ Business

NAME
TITLE COMPANY
ADDRESS
CITY STATE ZIP

OTHER QUESTIONS AND PROBLEMS
It is better to write us concerning your problem and include the magazine label. Also, address changes are handled more efficiently by mail. However, should you need to reach us quickly, the following toll-free number is available: **(888) 559-7327 Outside U.S. call (847) 559-7322.**
Internet address: cw@omeda.com

COMPUTERWORLD allows advertisers and other companies to use its mailing list for selected offers we feel would be of interest to you. We screen these offers carefully. If you do not want to remain on the promotion list, please write to the following address – COMPUTERWORLD, Circulation Department, One Speen Street, Framingham, MA 01701.

NAME
TITLE COMPANY
ADDRESS
CITY

HOW TO CONTACT COMPUTERWORLD

We invite readers to call or write with their comments and ideas. It is best to submit ideas to one of the department editors and the appropriate beat reporter.

Don Tennant (508) 620-7714
Editor in chief

Mitch Betts (301) 262-8243
Executive editor

Julia King (610) 532-7599
Executive editor, events

DEPARTMENT EDITORS

Craig Stedman (508) 820-8120
News editor

Mike Bucken (508) 820-8562
Assistant News editor

Tommy Peterson (508) 620-7729
Technology editor

Kathleen Melymuka (508) 820-8118
Management editor

REPORTERS

Matt Hamblen (508) 820-8567
Networking; mobile/wireless; network/systems management

Heather Havenstein (919) 386-0381
Business intelligence; application development; Web services; application server software; health care industry

Eric Lai (510) 768-2818
Windows, Linux, databases, desktop applications

Linda Rosencrance (508) 628-4734
General assignment; transportation and automotive industries

Carol Sliwa (508) 628-4731
National correspondent

Marc L. Songini (508) 820-8182
ERP; supply chain and CRM applications; RFID; food and agribusiness industries

Patrick Thibodeau (202) 333-2448
Enterprise systems; Unix; outsourcing and immigration; antitrust issues

Jaikumar Vijayan (630) 978-8390
Corporate security/privacy issues; related legislation and regulations

Todd R. Weiss (717) 560-5255
General assignment; open-source community; intellectual property issues; messaging/collaboration

FEATURES

Ellen Fanning (508) 820-8204
Special projects editor

Thomas Hoffman (845) 988-9630
National correspondent

Robert L. Mitchell (508) 820-8177
National correspondent

Mark Hall (503) 391-1158
Editor at large

Gary H. Anthes (703) 536-9233
National correspondent

Julia King (610) 532-7599
National correspondent

OPINIONS

Frank Hayes (503) 252-0100
Senior news columnist

COMPUTERWORLD.COM

Martha Connors (508) 620-7700
Vice president/general manager

Ian Lamont (508) 820-8187
Senior online projects editor

Gregg Linde (508) 820-8217
Online production manager

Joyce Carpenter (508) 820-8161
Online projects editor

Sharon Machlis (508) 820-8231
Managing editor/online

Ken Mingis (508) 820-8545
Online news editor

Marian Prokop (508) 620-7717
Online editor at large/Networking channel editor

David Ramel (508) 820-8269
E-mail newsletters/Networking channel editor

Lucas Mearian (508) 820-8215
Storage channel editor

Angela Gunn (206) 388-2508
Security channel editor

John R. Brillon (508) 820-8216
Associate art director

Dawn Petersen (508) 820-8131
Production designer

Peter Smith
Web development manager

Kevin Gerich, Mark Savery
Web developers

RESEARCH

Mari Keefe
Research manager

Gussie Wilson
Research associate

COPY DESK

Michele Lee DeFilippo (508) 820-8126
Managing editor/production

Bob Rawson (508) 271-8015
Assistant managing editor/production

Eugene Demaitre, Monica Sambataro
Senior copy editors

Donna Sussman
Copy editor

GRAPHIC DESIGN

Stephanie Faucher (508) 820-8235
Design director

April O'Connor
Associate art director

Susan Cahill
Graphics coordinator

David Waugh
Freelance designer

ADMINISTRATIVE SUPPORT

Linda Gorgone (508) 820-8176
Office manager

CONTRIBUTING EDITOR

Jamie Eckle (617) 596-1873
Opinions

CONTRIBUTING COLUMNISTS

Michael Gartenberg, Paul Glen, Barbara Gomolski, John Halamka, Thornton A. May, David Moschella, Bart Perkins, Virginia Robbins, Bruce A. Stewart

CONTRIBUTING WRITERS

Mary Brandel, Stacy Collett, Russell Kay, Mary K. Pratt, Drew Robb

TELEPHONE/FAX

Main phone number (508) 879-0700
All editors unless otherwise noted below
Main fax number (508) 875-8931
24-hour news tip line (508) 620-7716

E-MAIL

- Our Web address is www.computerworld.com.
- Staff members' e-mail follows this form: firstname_lastname@computerworld.com.
- For IDG News Service correspondents: firstname_lastname@idg.com.

LETTERS TO THE EDITOR

Letters to the editor are welcome and should be sent to: letters@computerworld.com. Include your address and telephone number.

MAIL ADDRESS

PO Box 9171, 1 Speen Street, Framingham, Mass. 01701

SUBSCRIPTIONS/BACK ISSUES

Subscription rates:
- U.S., $99.99/year
- Canada, $130/year
- Central and South America, $250/year
- All others, $295/year

Phone (888) 559-7327
E-mail cw@omeda.com
Back issues (888) 559-7327

REPRINTS/PERMISSIONS

Contact Renee Smith
Phone (717) 399-1900, ext. 172
E-mail reprints@computerworld.com
Visit www.reprintbuyer.com to obtain quotes and order reprints online.

COMPANIES IN THIS ISSUE

Page number refers to page on which story begins. Company names can also be searched at **www.computerworld.com**

ABI RESEARCH 31
ACTUATE CORP. 29
ADOBE SYSTEMS INC. 36
ADUVA INC. 10
ADVANCED MICRO DEVICES INC. 21
ALTARA 10
AMERICAN CHAMBER OF COMMERCE IN JAPAN 12
AMERICAN FIDELITY ASSURANCE CO. 50
AMERICAS' SAP USERS' GROUP 10
AUSTRALIAN NATIONAL AUDIT OFFICE 12
B2B ANALYSTS INC. 50
BAIDU.COM INC. 46
BAYSTAR CAPITAL CORP. 10
BEA SYSTEMS INC. 36
BLUE CROSS AND BLUE SHIELD OF KANSAS CITY 29
BMC SOFTWARE INC. 12
BOEING INTEGRATED DEFENSE SYSTEMS 12
BORLAND SOFTWARE CORP. 36
BOSTON UNIVERSITY SCHOOL OF MANAGEMENT 40
BROWARD COUNTY SCHOOL DISTRICT 28
BUSINESS OBJECTS SA 27
CA INC. 4
CARDSYSTEMS SOLUTIONS INC. 4
CARNEGIE MELLON UNIVERSITY 8
CENTER FOR INFORMATION MANAGEMENT STUDIES AT BABSON COLLEGE 40
CENTERS FOR DISEASE CONTROL AND PREVENTION 31
CERTEON INC. 36
CHG HEALTHCARE SERVICES 29
CIA 20
CISCO SYSTEMS INC. 4,16,24,36,45
CMANGO INC. 12
COGNOS INC. 28
COLUMBIA UNIVERSITY 8
COMMISSION FOR A NEW GEORGIA 10
COMPULINK MANAGEMENT CENTER INC. 6
COMPUTING TECHNOLOGY INDUSTRY ASSOCIATION INC. 45
CORNERSTONE ONDEMAND INC. 6
CURRENT ANALYSIS INC. 4
DARATECH INC. 1
DATASYNAPSE INC. 36
DELL INC. 4,31
DELTA AIR LINES INC. 46
DOMINO'S PIZZA INC. 46
DOW JONES & CO. 12,20
DUBAI PORTS WORLD 8
DURR SYSTEMS INC. 50
ENVIRONMENTAL SYSTEMS RESEARCH INSTITUTE INC. 30
ERNST & YOUNG INTERNATIONAL 12
EUROPEAN COMMITTEE FOR INTEROPERABLE SYSTEMS 12
EVANS & SUTHERLAND COMPUTER CORP. 36
EXPAND NETWORKS INC. 4
F5 NETWORKS INC. 4
FACTIVA 20
FBI 23,52
FLATIRON CONSTRUCTION CORP. 1
FORRESTER RESEARCH INC. 8,28,42
GARTNER INC. 4,28,45,46
GEOANALYTICS INC. 31
GEORGIA ADMINISTRATIVE OFFICE OF THE COURTS 27
GLOBALSAT TECHNOLOGY CORP. 31
GOOGLE INC. 24
GREENPLUM INC. 28
GUILFORD COUNTY DEPARTMENT OF PUBLIC HEALTH 31
HALLIBURTON INC. 10
HEWLETT-PACKARD CO. 10,31
HYPERION SOLUTIONS CORP. 29
IBM 10,12,16,20,21,29
ICEX INC. 40
IDC 21
INFORMATION BUILDERS INC. 28,42
INFORMATION TECHNOLOGY ASSOCIATION OF AMERICA 45
INFRAVIO INC. 50
INNOBASE OY 8
INTEL CORP. 21,36
INTERCONTINENTAL HOTELS GROUP PLC 46
INTERNET SECURITY SYSTEMS INC. 16
ITRONIX CORP. 30
JAMES FINANCIAL INC. 16
JASPERSOFT CORP. 28,29
JUNIPER NETWORKS INC. 4
KICHLER LIGHTING CO. 50
KPMG INTERNATIONAL 12
LASERFICHE 6
LINUX NETWORX INC. 21
LOGICLIBRARY INC. 50
LUMIGENT TECHNOLOGIES INC. 16
MADAR RESEARCH GROUP FZ-LLC 8
MEGAPATH NETWORKS INC. 6
MERRILL LYNCH & CO. 50
META GROUP INC. 25
MICRON TECHNOLOGY INC. 6
MICROSOFT CORP. 4,6,10,12,16, 20,23,24,36,50
MOOG INC. 1
MUELLER INC. 28
MYSQL AB 8,20
NATIONAL CENTER FOR WOMEN & INFORMATION TECHNOLOGY 45
NAVICA INC. 28
NAVIO SYSTEMS INC. 4
NEOIT COM INC. 8
NETIFICE COMMUNICATIONS INC. 6
NEW HAMPSHIRE DIVISION OF MOTOR VEHICLES 23,52
NEW HAMPSHIRE LIQUOR COMMISSION 23
NEW HAMPSHIRE OFFICE OF INFORMATION TECHNOLOGY 23,52
NEW HAMPSHIRE VETERANS HOME 23,52
NEW YORK STOCK EXCHANGE INC. 12
NOKIA CORP. 12
NORTH BAY BANCORP. 24
NSA 20
NTP INC. 4
OPERA SOFTWARE ASA 12
OPPENHEIMER & CO. 42
ORACLE APPLICATIONS USER GROUP 50
ORACLE CORP. 8,12,20, 28,31,36,42
ORBITAL DATA CORP. 4
OWENS-ILLINOIS INC. 10
OXFORD UNIVERSITY 32
PACIFIC STEEL & RECYCLING INC. 50
PEKING UNIVERSITY 46
PENTAHO CORP. 28,29
PFIZER INC. 40
PHILIPS ELECTRONICS NV 4
PIXAR ANIMATION STUDIOS 36
PROGRESS SOFTWARE CORP. 6
PROOF-POINT INC. 34
PRTM 42
PUND-IT INC. 4
QUEST INTERNATIONAL USERS GROUP 50
RAMBUS INC. 6
RAYMOND JAMES FINANCIAL INC. 16
RED HAT INC. 12
RESEARCH IN MOTION LTD. 4,20
REUTERS GROUP PLC 20
RIVERBED TECHNOLOGY INC. 4
ROCKWELL COLLINS INC. 36
RUSSIAN SPACE FORCES 31
SABRE INC. 46
SANS INSTITUTE 45
SAP AG 10,29,42,50
SAS INSTITUTE INC. 42
SEARS HOLDINGS CORP. 30
SIERRA ATLANTIC INC. 8
SILICON GRAPHICS INC. 21,36
SINGLETRAC ENTERTAINMENT TECHNOLOGIES INC. 36
SLEEPYCAT SOFTWARE INC. 8
SOA SOFTWARE INC. 1
SOFTWARE AG 1
STANFORD UNIVERSITY 6
STARWOOD HOTELS & RESORTS WORLDWIDE INC. 46
STMICROELECTRONICS NV 12
STUART MAUE MITCHELL & JAMES LTD. 28
SUN MICROSYSTEMS INC. 10,21
SYBASE INC. 20
SYSTINET CORP. 50
TACIT NETWORKS INC. 20
TANGENT COMPUTER INC. 6
THE 451 GROUP 8
THE APACHE SOFTWARE FOUNDATION 8
THE ECLIPSE FOUNDATION 28
THE HACKETT GROUP INC. 45
THE HILLMAN GROUP INC. 28
THE NASDAQ STOCK MARKET INC. 12
THE PENINSULAR AND ORIENTAL STEAM NAVIGATION CO. 8
THE SCO GROUP INC. 6,10
THE STORAGEIO GROUP 20
THE WALT DISNEY CO. 36
THOMSON LEARNING 1
TIMESTEN INC. 8
TIVOLI SOFTWARE 16
TOKYO STOCK EXCHANGE INC. 12
TREND MICRO INC. 34
TRIPOS INC. 36
U.S. ARMY 21
U.S. COAST GUARD 31
U.S. DEPARTMENT OF DEFENSE 31
U.S. DEPARTMENT OF JUSTICE 23
U.S. DEPARTMENT OF LABOR 45
U.S. FEDERAL TRADE COMMISSION 4
USG CORP. 12
VALERO ENERGY CORP. 42
VENTANA RESEARCH INC. 28
VERIZON COMMUNICATIONS INC. 39, 40
VONTU INC. 16
WEBTECH WIRELESS INC. 31
WELLPOINT INC. 40
WIPRO LTD. 12
WIPRO TECHNOLOGIES 12
WORLD WIDE WEB CONSORTIUM 32
YAHOO INC. 8,24,34
YUM BRANDS INC. 46
ZAPTHINK LLC 50

Continued from page 1

Fusion

future with the vendor.

Since the buyout, Oracle executives have said that customers will not be forced to move from their installed applications to Fusion. The integrated suite will be developed using input gleaned through organizations such as the Quest International Users Group and the Oracle Applications User Group, they said.

In addition, a spokesman said last week that Oracle executives will soon take to the road in a program to solicit customer feedback and answer questions about Fusion.

Holding Back

Despite the efforts to reach out to users, the creation of a detailed Fusion road map is happening at a "glacial rate," said Robert Robinson, a business systems supervisor at Durr Systems Inc. The Plymouth, Mich.-based automotive supplier uses J.D. Edwards ERP applications.

> **There is no question that PeopleSoft and J.D. Edwards customers are better off than they were a year ago.**
>
> **JOHN MATELSKI,** DEPUTY CIO, CITY OF ORLANDO

Robinson said he plans to study early adopters' use of the technology before deciding whether to upgrade to Fusion.

Many customers are concerned about the size and complexity of the planned Fusion suite, which will incorporate parts of Oracle's various applications, noted Dave Richards, CIO at Great Falls, Mont.-based Pacific Steel & Recycling Inc., which runs J.D. Edwards' OneWorld XE.

"There are still many questions about costs, support, technology and migration paths that have yet to be answered," Richards said.

John Schindler, CIO at PeopleSoft Enterprise shop Kichler Lighting Co., a lighting fixtures maker in Cleveland, estimated that it will take another 12 months to accurately assess the merits of the acquisition.

Schindler said that in the meantime he is getting "nervous" about Fusion. "It is too early, so for now I'll take a wait-and-see approach," he added.

Five of the customers interviewed said they are unequivocally upbeat about the deal, even with the questions surrounding Fusion. For example, Oracle's decision to create a lifetime basic support policy for most of its applications and to continue updating the J.D. Edwards and PeopleSoft lines impressed John Matelski, president of Quest and deputy CIO for the city of Orlando, a PeopleSoft shop.

Keeping the Base

Oracle has made the following moves to keep PeopleSoft users:

- **Has promised no forced marches onto Fusion.**
- **Will provide basic support for all applications through 2013 – and beyond that date for most.**
- **Will make special support programs available later for a price.**
- **Will create a key account director program so users will have one point of contact.**
- **Has worked with CIO advisory board and user groups to gather feedback.**

"There is no question that PeopleSoft and J.D. Edwards customers are better off than they were a year ago," he said.

David Dobrin, an analyst at consultancy B2B Analysts Inc. in Cambridge, Mass., said that much of Oracle's installed base is concerned about the plans for Fusion. "Oracle doesn't seem to be seriously addressing the natural concerns of people that have to make a decision about Fusion," he noted.

Meanwhile, Oracle rival SAP AG said that user uncertainty over the merger in general and Fusion in particular has helped it pick up 200 former Oracle customers over the past year. Most of the defectors had been PeopleSoft accounts, according to an SAP spokeswoman.

Jeb Dasteel, Oracle vice president of global customer programs, downplayed any defections to SAP as statistically negligible.

Moreover, he noted that since the merger, Oracle has worked to collaborate with the user groups and has regularly reached out to inform customers of its plans. ▸

Continued from page 1

Web Services

terprisewide approach to SOA governance.

Thomson Learning has about 10 registries, including stand-alone offerings from vendors like LogicLibrary Inc. and Systinet Corp. and registries packaged with applications from Microsoft Corp. and SAP AG. Thomson also uses several Web services management and security tools, Crowhurst said.

In addition, the number of Web services in production at Thomson Learning has quadrupled over the past year, he said. One business unit alone has created more than 50 services over the past year. The company has 44 business units, Crowhurst said.

Today, Thomson Learning creates and enforces policies to govern Web services by manipulating the interfaces of its XML gateways, application servers and other services' endpoints, he said.

Data About Metadata

- The metadata around services often contains information about who can access a service, what security must be used with it, and the service-level agreements for a service.
- SOA Software is making its products registry-independent so any registry can store the location details about metadata in the company's Web services management and security products.
- At the core of Software AG's Crossvision suite is a services registry and repository that is automatically populated with metadata from other tools in the suite.

To ease that process, Crowhurst said, he is searching for technology that can create and enforce Web services policies through the entire life cycle of a service, from design to runtime.

"There are very few tools capable of managing policy that way, and none capable of enforcing policy that way," he said.

Crowhurst said that although all of the Web services vendors his company works with position their tools as the backbone for governance, none is up to the task yet.

The standards effort led by SOA Software was prompted by users who are increasingly demanding that management and policy products work with multiple registries, according to Ian Goldsmith, vice president of product marketing at the Santa Monica, Calif.-based company. SOA Software currently requires that customers use its proprietary registry.

Goldsmith said that several vendors will join in the standards effort, but he declined to identify any of them.

Miko Matsumura, vice president of marketing and technology standards at Infravio Inc. in Cupertino, Calif., confirmed last week that his company plans to endorse the standards effort. Infravio is a provider of registries and SOA governance tools.

At the same time the UDDI partners are disclosed, SOA Software will unveil "registry independent" versions of its Service Manager Web services management product, its XML VPN product, and the technology that it acquired late last year from Merrill Lynch & Co. for exposing legacy data within an SOA, Goldsmith said.

Help With HIPAA

American Fidelity Assurance Co. is testing Software AG's new Crossvision suite of tools with an XML-based application that it built to send and receive information from partners and users who comply with standards in the Health Insurance Portability and Accountability Act (HIPAA), said Jim Lupton, vice president and director of systems management at the Oklahoma City-based insurance company.

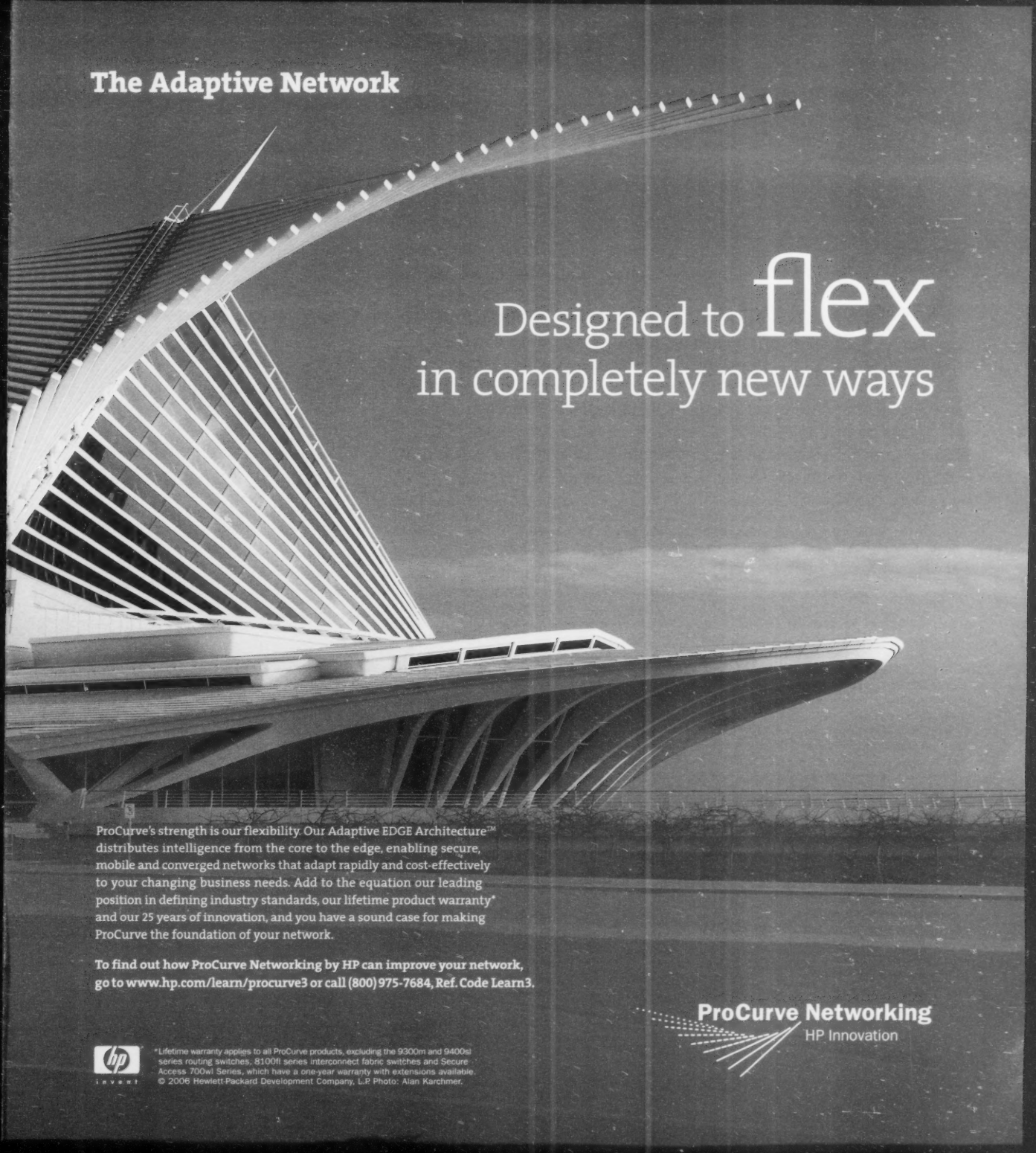
Lupton said he hopes the updated tool set can provide a centralized store for metadata so users won't have to call IT to get information about services-related policies. The company is a longtime user of older Software AG registry and repository products.

Ron Schmelzer, an analyst at ZapThink LLC, said users have been seeking SOA governance tools to create and enforce policies to ensure that their burgeoning stables of Web services comply with HIPAA, the Sarbanes-Oxley Act and other regulations.

"Most of SOA is not in the code," he said. "It is in the metadata and the policies." ▸

Periodical postage paid at Framingham, Mass., and other mailing offices. Posted under Canadian International Publication agreement #40063800. **CANADIAN POSTMASTER:** Please return undeliverable copy to PO Box 1632, Windsor, Ontario N9A 7C9. Computerworld (ISSN 0010-4841) is published weekly, except a single combined issue for the last two weeks in December by Computerworld, Inc., 1 Speen Street, Box 9171, Framingham, Mass. 01701-9171. Copyright 2006 by Computerworld Inc. All rights reserved. Computerworld can be purchased on microfilm and microfiche through University Microfilms Inc., 300 N. Zeeb Road, Ann Arbor, Mich. 48106. Computerworld is indexed. Back issues, if available, may be purchased from the circulation department. Photocopy rights: permission to photocopy for internal or personal use is granted by Computerworld Inc. for libraries and other users registered with the Copyright Clearance Center (CCC), provided that the base fee of $.3 per copy of the article, plus 50 cents per page, is paid directly to Copyright Clearance Center, 27 Congress St., Salem, Mass. 01970. Reprints (minimum 100 copies) and permission to reprint may be purchased from Renee Smith, Computerworld Reprints, c/o Reprint Management Services, Greenfield Corporate Center, 1508 Colonial Village Lane, Lancaster, Pa. 17601, (717) 399-1900, Ext. 172, Fax (717) 399-8900. Web site: www.reprintbuyer.com. E-mail: reprints@computerworld.com. Requests for missing issues will be honored only if received within 60 days of issue date. Subscription rates: $5 per copy; U.S. – $99.99 per year; Canada – $130 per year; Central & So. America: $250 per year; Europe – $295 per year; all other countries – $295 per year. Subscriptions call toll-free (888) 559-7327. **POSTMASTER:** Send Form 3579 (Change of Address) to Computerworld, PO Box 3500, Northbrook, Ill. 60065-3500.

BPA ABM RED TAG



ProCurve's strength is our flexibility. Our Adaptive EDGE Architecture™ distributes intelligence from the core to the edge, enabling secure, mobile and converged networks that adapt rapidly and cost-effectively to your changing business needs. Add to the equation our leading position in defining industry standards, our lifetime product warranty* and our 25 years of innovation, and you have a sound case for making ProCurve the foundation of your network.

To find out how ProCurve Networking by HP can improve your network, go to www.hp.com/learn/procurve3 or call (800) 975-7684, Ref. Code Learn3.

ProCurve Networking
HP Innovation

hp invent

*Lifetime warranty applies to all ProCurve products, excluding the 9300m and 9400sl series routing switches, 8100fl series interconnect fabric switches and Secure Access 700wl Series, which have a one-year warranty with extensions available.
© 2006 Hewlett-Packard Development Company, L.P. Photo: Alan Karchmer.

FRANK HAYES ■ FRANKLY SPEAKING

Common Insecurity

WHAT do people who renew their driver's licenses, buy hard liquor or donate to a home for elderly and disabled veterans have in common? In New Hampshire, people who did any of those things within the past six months may have had their credit card numbers stolen because of computer security issues.

No, there hasn't been a rash of hacker attacks or virus outbreaks. All three groups are potential victims of a single piece of malware found earlier this month on one state-owned server (see story, page 23).

How it got there is now under investigation. Why all those different victims ended up on one server is a different problem.

According to the New Hampshire Office of Information Technology, the compromised machine was one of the state government's smaller servers. But it was used by the Division of Motor Vehicles for processing payments by credit or debit card. And by the state Liquor Commission as a backup system for processing sales at state-owned liquor stores. *And* for collecting donations to support the New Hampshire Veterans Home.

It's not hard to figure out how they got lumped together on the same box. That's what IT consolidation is all about, isn't it? Three separate, unrelated agencies had a similar need: processing credit card transactions. There was enough spare capacity on the DMV's server to handle the Liquor Commission's overflow and to pick up the small number of donations to the Veterans Home. Why buy two extra servers?

It must have seemed like a good, frugal idea at the time. It was only data, after all. On the server, why shouldn't drinking and driving mix?

And the consolidation worked fine — as long as nothing went wrong. But with nothing separating the three sets of transactions, a single security breach turned into a three-fer.

It's hard to fault the state IT people for their response. They knew they were stretched too thin on security, which is why they were testing an automated intrusion-detection tool. That's how the Cain & Abel program, which can capture credit card numbers, was discovered.

And once it was found, they acted. Potential victims were notified. The FBI was called in. The infected server was carted away for forensic analysis. One IT employee was put on paid leave, though the state won't yet say why.

FRANK HAYES, *Computerworld*'s senior news columnist, has covered IT for more than 20 years. Contact him at **frank_hayes@computerworld.com**.

What they couldn't do was turn back the clock and do their consolidation differently so that, even if the server was breached, they'd be contacting victims from only one agency — not three.

Look, consolidation isn't just an attractive option; it's inevitable. IT hardware just keeps getting cheaper, and the human cost of administering it keeps going up. It only makes sense to reduce the number of boxes and fill up unused capacity in our data centers.

But it can't be done casually or haphazardly. Maybe consolidation isn't exactly the enemy of security, but it poses real security challenges. Simply shoveling different processes or data sets into unused server capacity means we lose the physical separation that provides an important layer of security.

Yes, that's convenient. It's budget friendly. But it's not safe.

The more we can segregate our processes — the more locked doors we can put between one running process and another — the harder it becomes for an intruder to have free access, and the easier it is to keep things secure.

In networks, we can use subnets to separate processes and contain problems. On servers, we can use virtualization. That's more complicated and expensive than just piling things in together. But it's the kind of "defense in depth" that we need today to protect customer and corporate information from saboteurs, intruders and worms.

And in the face of IT consolidation and never-ending security threats, it's the only way to make sure that customers who are driving, drinking or donating have a lot *less* in common. ◗

SHARK TANK

Think Global, Act Loco

IT support team gets a call from a user who says that hyperlinks in the recently installed ERP system are no longer working. Support guys can't figure it out – can't even replicate the problem, in fact – so it's escalated to the continental-level help desk. That team can't replicate the problem either, so it's kicked up to global support, where it lands in the lap of this sysadmin pilot fish who notes that no other users are having the problem. "After two minutes on the phone, the user owns up to running a pop-up blocker," sighs fish. "After allowing pop-ups, he is overjoyed to have the issue corrected."

Not So Fast!

It's the early 1980s, and this pilot fish is an enthusiastic rookie Cobol programmer who gets an assignment to collect user input and create a report for management. "My boss figured this project would keep me busy for a few weeks," says fish. "But that same afternoon, I delivered a finished, compiled program along with a hard-copy report matching the exacting requirements." The disbelieving boss spends several days analyzing the program and report, but finds no bugs or holes. Still, they sit on her desk for another two weeks because otherwise, she tells fish, "the user would expect this type of service all of the time, and we can't have that!"

Double Up

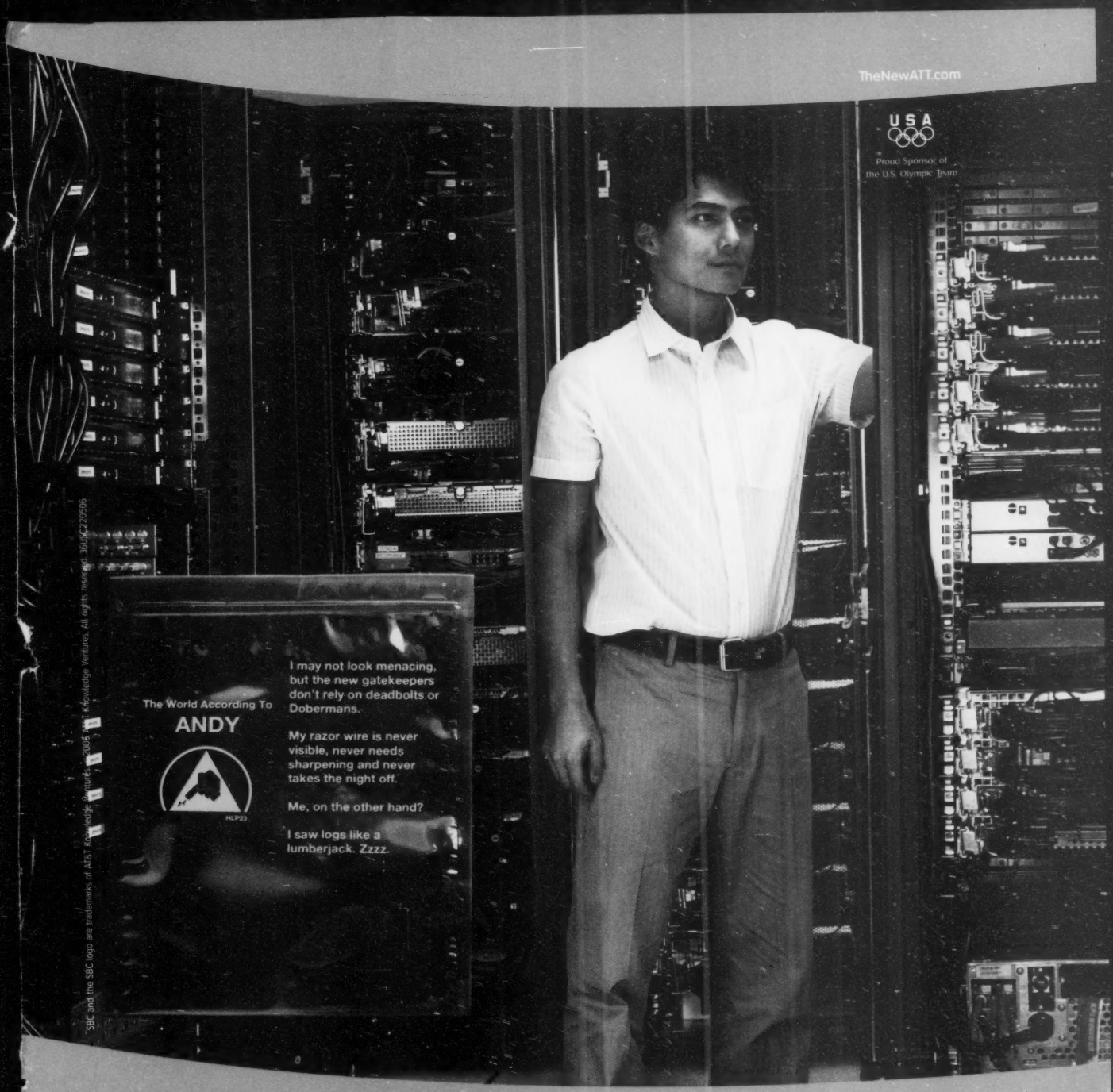
User gets a new PC, and while IT pilot fish is setting it up, she notices that there are duplicate icons for some applications because the user has a roaming profile. Fish removes the doubles and delivers the PC. User: "How come I don't have two e-mail icons anymore?" Fish: I was trying to clean up the desktop so it wasn't so cluttered. You only need one icon to use e-mail. User: "I guess that's OK. I only read one e-mail at a time anyway."

Sticky Problem

This sort-of-tech-savvy user is gone but not quite forgotten, says a pilot fish who had to clean up the mess. "He once forwarded all his colleagues e-mail to their pagers, quickly exceeding the pager quotas and rendering the pagers useless," fish says. "After he left, one of his colleagues brought a PC to us that this guy had worked on. It was making some disturbing noises. What had been done? we asked. A hard drive had been added. We popped the cover and found the source of the noise. Our buddy had indeed installed a second hard drive. And instead of using a mounting kit, he had hot-glued it to the chassis."

DON'T LET SHARKY GET STUCK. Send me your true tale of IT life at **sharky@computerworld.com**. You'll get a stylish Shark shirt if I use it. And check out Sharky's blog, browse the Sharkives and sign up for Shark Tank home delivery at **computerworld.com/sharky.**

TheNewATT.com


USA
Proud Sponsor of
the U.S. Olympic Team
The World According To
ANDY
HLP23
I may not look menacing, but the new gatekeepers don't rely on deadbolts or Dobermans.
My razor wire is never visible, never needs sharpening and never takes the night off.
Me, on the other hand?
I saw logs like a lumberjack. Zzzz.

SBC and the SBC logo are trademarks of AT&T Knowledge Ventures. ©2006 AT&T Knowledge Ventures. All rights reserved. 3610KC220506

Andy rests well knowing the new AT&T helps keep his integrated VPN secure with network-based firewalls, antivirus scanning and intrusion detection services.

The new at&t Your world. Delivered.™

SBC | AT&T

Oracle Database 10*g*

#1 On Windows

Starts at $149 per user

Oracle Database 10*g*—
The World's #1 Database. Now For Small Business.

ORACLE®

oracle.com/start
keyword: #1onWindows
or call 1.800.633.0675

Terms, restrictions and limitations apply. Standard Edition One is available with Named User Plus licensing at $149 per user with a minimum of five users or $4995 per processor. Licensing of Oracle Standard Edition One is permitted only on servers that have a maximum capacity of 2 CPUs per server.
For more information, visit oracle.com/standardedition

Copyright © 2005, Oracle. All rights reserved. Oracle, JD Edwards and PeopleSoft are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.